


RESEARCHES OF THE DEPARTMENT OF
TERRESTRIAL MAGNETISM

VOLUME IX

Earth-Current Results at Tucson Magnetic
Observatory, 1932-1942

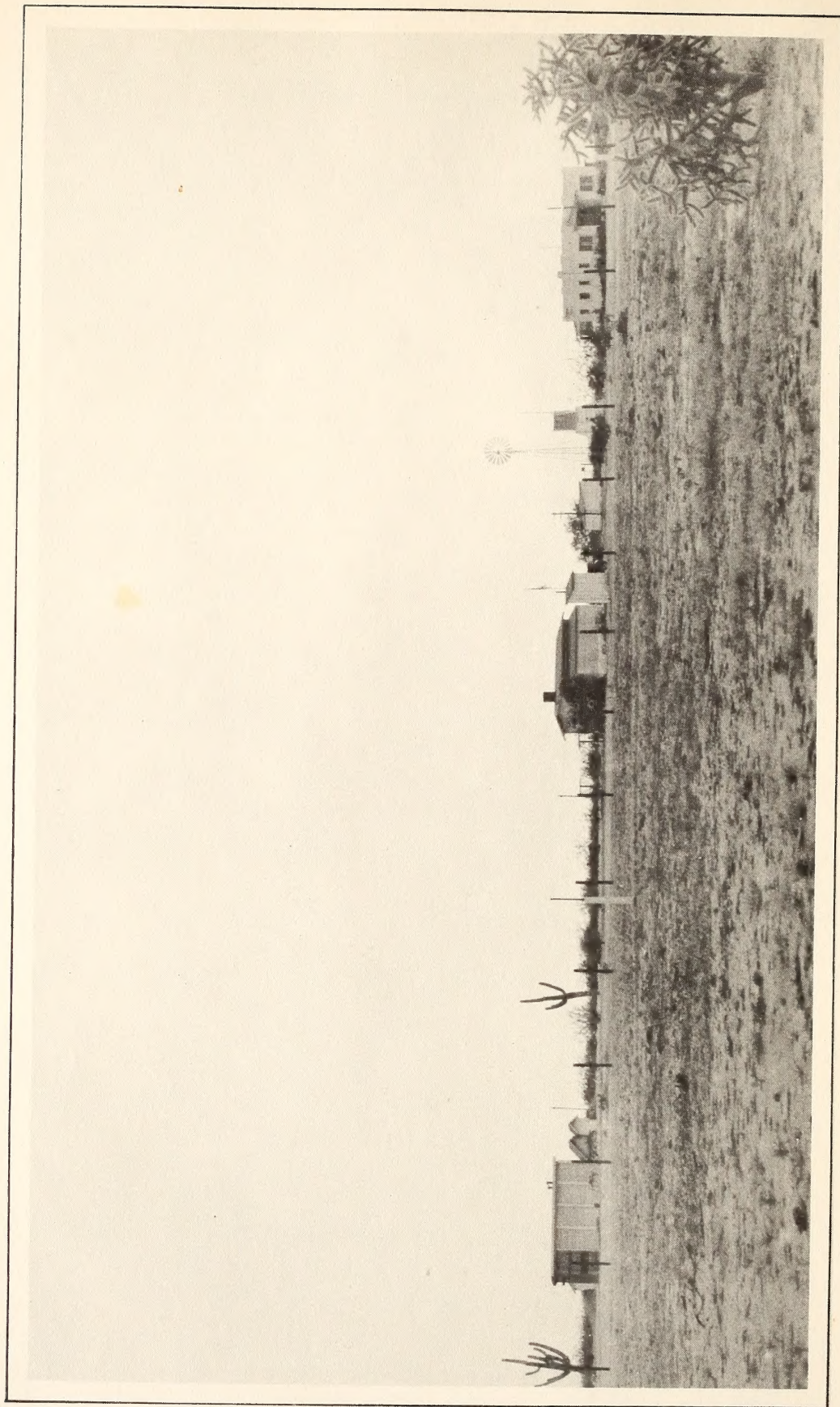
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VIEW OF TUCSON MAGNETIC OBSERVATORY OF THE UNITED STATES COAST AND GEODETIC SURVEY
Earth-current recorder installed in flat-roofed laboratory building at left.

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VOLUME IX

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Earth-Current Results at Tucson Magnetic
Observatory, 1932-1942

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PREFACE

The earth-current investigations of the Department of Terrestrial Magnetism were begun in 1918. After considerable experimentation in electrode performance, measuring systems for continuous registration were designed, and the first installation was made at Watheroo Magnetic Observatory in 1923. The second installation was made at Huancayo Magnetic Observatory in 1926, and the third was made at Tucson Magnetic Observatory of the United States Coast and Geodetic Survey in 1931.

The Tucson earth-current project was initiated after expressions of interest in work of this type on the part of the Bell Telephone Laboratories and indications of their desire to participate actively in a program of observation by making available the necessary telephone lines. A survey of available lines in suitable localities led to the choice of facilities at Tucson, Arizona, as being the most satisfactory, and negotiations were entered into with officials of the United States Coast and Geodetic Survey in order to secure space for recording equipment and technical assistance for the program of observation at the Tucson Magnetic Observatory. The fullest co-operation was received at all times during the nearly 12 years of work from May, 1931, to February, 1943, from members of the staff of the Observatory and from personnel of the Mountain States Telephone and Telegraph Company of the Bell System, making the project a most satisfactory co-operative endeavor in all respects.

Earth-current data are comparatively scarce in the literature, particularly where detailed results are concerned. Most of the results reported for these and other stations have consisted chiefly of summaries, average values, and the like. Practically the only exception has been the investigation at Ebro, Spain, for which station the individual hourly values of potential were published in the Monthly Bulletins of the Ebro Observatory from 1910 to 1938.

As part of the current publication program of the Carnegie Institution of Washington, it was decided to

augment the amount of basic data available for study and analysis of earth currents by presenting individual hourly values for the two stations of the Department of Terrestrial Magnetism and the co-operative station at Tucson for the period for which the records were concurrent. This period fortunately is just about equal to a normal sunspot cycle, a fact which has made possible various interesting correlations with related phenomena.

The present volume contains the basic data from the Tucson installation for the 11 complete years of the system's operation, 1932 to 1942, together with summaries of the results designed to show the main features of the salient variations in earth-current flow and references to detailed papers on specific phases of the work.

The author wishes to acknowledge indebtedness to Dr. J. A. Fleming, Director of the Department of Terrestrial Magnetism until June 30, 1946, and O. H. Gish, Assistant Director; to Captain N. H. Heck, former Chief of the Division of Terrestrial Magnetism of the United States Coast and Geodetic Survey; and to G. C. Southworth and Lloyd Espenscheid, of the Bell Telephone Laboratories, whose co-operative efforts were effective in initiating and sustaining the project.

Acknowledgment is also due to five successive Observers-in-Charge of the Tucson Magnetic Observatory, A. K. Ludy, J. W. Joyce, John Hershberger, R. F. White, and J. H. Nelson, for the very satisfactory operation of the recording equipment; to the personnel of the maintenance division of the Mountain States Telephone and Telegraph Company for the efficient line performance throughout the years of operation; and finally to M. H. Walburn of the Carnegie Institution's Publications Division for editing and arranging the material, and to W. C. Hendrix of the Department of Terrestrial Magnetism for the graphs and illustrations which supplement it.

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EARTH-CURRENT RESULTS AT TUCSON MAGNETIC OBSERVATORY, 1932-1942

INTRODUCTION

In March, 1931, the continuous registration of earth-current potentials at the Tucson Magnetic Observatory was undertaken as a co-operative project of the United States Coast and Geodetic Survey, the Bell Telephone Company, and the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. Early in 1943, because of the necessity for commercial use of the telephone lines devoted to the measurements, the Bell Telephone Company was obliged to withdraw its support of the project, and recording was discontinued at the end of February of that year. The period of operation, a little over eleven and one-half years, covered a full and typi-

cal sunspot cycle, a fact which has enhanced the value of the records for purposes of correlation with allied phenomena. Final reduction of the records has been completed, and the data have been compiled in convenient form. A summary of the mean values for the 11 complete years of the system's operation, together with a tabulation of the mean values for each hour of this same period in which a satisfactory record was obtained, is presented here to show the general variations with season and with solar activity and to make the records available for use in other geophysical investigations.

DETAILS OF SITE AND APPARATUS

Registration of earth-current potentials at Tucson was made on two lines, one from Tucson to Mammoth, a little under 60 km distant and a little east of north from Tucson, and the other from Tucson to Wilcox, which is a little over 90 km away in a nearly due east direction. Pertinent data on the site, lines, and instruments follow.

The measuring instruments, located in the atmospheric-electric building of the Tucson Magnetic Observatory (United States Coast and Geodetic Survey), consisted of two Leeds and Northrup portable "lamp-and-scale" galvanometers used with a single-filament lamp and a drum recorder. The galvanometer elements carried spherical mirrors with a focal length of one meter. The only optical equipment in addition to the spherical mirrors was a single cylindrical lens behind the recorder slit to bring the light beam to a spot focus on the recording paper. The current sensitivity of the galvanometers, about 2.5×10^{-9} amperes per millimeter deflection on the drum, was much higher than necessary in view of the long lines used. This permitted the use of high resistances (1.5 megohms) in series with the galvanometers so that the total resistances of the measuring circuits were not appreciably affected by minor variations in line resistances or in the contact resistances at the electrodes. The entire resistance of the external circuit was less than 1,000 ohms for either line and thus could vary by an order of magnitude without affecting the records.

The simple circuit used in the measurements is shown in Figure 1. Each galvanometer, it will be seen, was permanently shunted by Resistance R_S which totaled 22,000 ohms, the critical damping resistance of the galvanometer. The galvanometer and its shunt were connected to the electrodes through the series resistance R_P (1.5 megohms). The sensitivity of the unit was readily adjustable over a wide range by shifting the connections designated a, b, and c, which varied the percentage of the total current passing through the galvanometer without appreciably changing its damping. Direct calibration at any sensitivity was made by substituting known electromotive forces for the earth-current potentials by means of the double-pole, double-throw switch and a standard potentiometer. A clock-controlled switch which opened the circuits once each hour, for the double purpose of providing a time mark and a check on the galvanometer zero-position, completed the equipment.

Connection between the recording apparatus and the electrodes was made over telephone lines of the Mountain State Telephone and Telegraph Company through the Tucson Exchange. The lines were all of overhead open-wire type except for a mile or two in the city of Tucson where underground cables were used.

The electrodes used were web-shaped grids of lead wire. The common electrode (O), located on the grounds of the Tucson Magnetic Observatory, was built up of five concentric circular loops of the wire, with eight approximately radial arms connecting the loops and meeting at the center of the grid to form a core to which the connection to the line was made. The outside diameter of the grid was about 6 meters, and it was set at a depth of about 1.8 meters. Similar but smaller grid electrodes set in rectangular trenches about 6 square meters in area and between 1 and 1.5 meters deep were used at Mammoth (M) and Wilcox (W).

The Tucson Magnetic Observatory, the central point of the installation, is situated near the east side of the broad valley of the Santa Cruz River, some 10 miles from the center of the city of Tucson, in latitude $32^{\circ} 15'$ north, longitude $110^{\circ} 51'$ west, at an elevation of 770 meters above sea level. The elevation at Mammoth is approximately 720 meters; Wilcox lies to the east toward the continental divide at an elevation of 1,275 meters. Between Tucson and Mammoth are the Santa Catalina Mountains, the highest peak of which, Mount Lemon, rises to 2,800 meters. The region between Tucson and Wilcox is also generally mountainous with the Rincon and Tanque Verde ranges lying not far off a direct line between the two points.

No important changes in equipment or in arrangement of lines were made during the entire period of operation, with the exception of a slight shift in the location of the Northernmost electrode (M) at Mammoth at the end of July, 1936. For this reason, the data secured are notably homogeneous and suitable for analysis.

Prior to the change in location of electrode (M) in July, 1936, the length of line OM, hereinafter referred to as the Northerly line, was 56.8 km and its direction north $19^{\circ} 5'$ east. From August, 1936, its length was 58.4 km and its direction $17^{\circ} 8'$ east. For the entire period, 1931 to 1943, the length of line OW was 93.9 km, and its direction was east $0^{\circ} 5'$ north.

REDUCTION OF RECORDS

In reducing the records, the Eastward component is obtained with sufficient accuracy directly from the records on line OW which departs from a true west-east line by only a scant half degree. The true Northward component, as distinct from the Northerly component recorded on line OM, is calculated from the combined records on the two lines using the formula

$$N = \frac{N' \cos \alpha_1 - E' \cos \alpha_2}{\sin (\alpha_2 - \alpha_1)}$$

where N = true northward gradient; N' = gradient recorded on northerly line, OM; E' = gradient recorded on easterly line, OW; α_1 = angle between OW and a true west-east line, i.e., $0^\circ.5$ (measured counterclockwise); and α_2 = angle between OM and the same west-east line, viz., $70^\circ.5$ prior to August, 1936, and $72^\circ.2$ after that date.

Substituting these values in our equation, we have for records up to July 31, 1936, $N = 1.064 \text{ OM} - 0.356 \text{ OW}$; and for records after August 1, 1936, $N = 1.054 \text{ OM} - 0.323 \text{ OW}$.

The recorder was calibrated once a week by means of potentials applied from a Leeds and Northrup potentiometer. To eliminate one step in the reduction of the records, the calibration data were worked up in terms of potential gradient rather than in units of potential. The unit most generally used in reporting on earth currents is "millivolts per kilometer." To avoid the use of decimal points in the tabulation of basic data, such as hourly mean values, monthly means, etc., a unit one-one-hundredth as great has been used, i.e., "hundredths of millivolts per kilometer." In the graphs and discussion, however, the more usual unit has been used throughout. Monthly tabulations of hourly mean values of potential gradient for both Northerly and Eastward components for the period 1932 to 1942 appear in Tables 55 to 318.

To determine the actual potential differences between electrodes, the values shown in the tables must be multiplied by the length of the line which is given in the table heading. For instance, a value of 100 in one of the tables for the Eastward component indicates a potential difference between electrodes "O" and "W" of 939 hundredths of a millivolt, i.e., 9.39 millivolts or 0.00939 volts.

The signs of the gradient as reported are in agreement with the convention that flow of current toward the north or east is positive and flow toward the south or west, negative. In other words, a plus sign indicates that electrode "O" was positive with reference to electrode "M" or "W" as the case may be.

Blank spaces in the tables indicate missing record for all or part of the hour involved. Occasionally missing record was the result of faulty operation of the recording equipment, but most of it was due to off-scale deflections during disturbances. For this reason the

records secured near the sunspot maximum are the least comprehensive. No attempt has been made to differentiate between the two types of missing record in the tables.

Calibration data and periodic line tests indicated that the accuracy of registration was quite uniform over the entire period of operation and all recorded values are believed to be equally suitable for study and analysis with the exception of those for the periods September, 1935, August to October, 1939, and nine days in November, 1940.

The records for the month of September, 1935, are suspect because the diurnal variation, or any other variation, as determined from them is almost exactly alike for both Northerly and Eastward lines and resembles those typical for the Eastward line on equinoctial months. It is believed that both of the lines from electrode "O" at the Observatory must have been inadvertently connected to the Wilcox electrode "W" during this period. This could have happened at the switchboard in the Tucson Telephone Exchange, but that it did happen could not be determined definitely. The data are consequently presented as reported by the Observatory. The differences introduced into the mean annual or over-all mean values when the data for September, 1935, are included are so small that they can be neglected. However, in any specific investigation involving that individual month, they should be regarded as of doubtful value.

The records for the three-month period August, September, and October, 1939, are also in the doubtful category. When the records as received from the Observatory were reduced, the result was an unusual set of hodographs showing variations not paralleled in the magnetic records and unlike those for the same months in other years. Examination of the data showed that the results would be quite normal if it were assumed that the two lines had been interchanged either at the Tucson Exchange or at the Observatory. Again, it could not be determined whether this actually happened. In this case, the evidence from the records is so conclusive that the final reduction was made on the basis that the interchange did occur and that the line marked "OM" was recording the Eastward potentials and the line "OW" the Northerly ones.

In November, 1940, during the periods from November 7 to 9 and from November 17 to 22, erratic values were recorded on both lines, and there was definite evidence that extraneous potentials were being picked up, probably because of leakage from a circuit of higher voltage. The values recorded during these periods are shown in the tables for the month but have not been included in the monthly means nor used in any of the analyses.

In determining monthly and annual means, the records for all complete days were used. Partial-day records were neglected because they tended to distort the diurnal variation curves, particularly since most of the loss of record occurred during disturbances.

DISCUSSION OF RESULTS

General Considerations.--It has been pointed out repeatedly that the absolute values of potential recorded on any earthed lines include not only potential differences due to earth-current flow but also potentials which depend on electrochemical activity at the electrodes^{1,2} and do not indicate any actual current flow. On short lines, the electrochemical potentials are usually predom-

inant and may be as much as a hundred times as great as those due to earth-current flow.³ Since these electrode potentials are independent of the distance between electrodes, their importance decreases as the length of line is increased. At Tucson, for instance, the daily mean values which represent chiefly electrode potentials and whose changes from day to day indicate mostly slow

variations in them were found to be usually only a few per cent of the maximum and minimum values recorded during any day. Nevertheless, too much attention should not be given to the daily mean values even at Tucson, or to the mean hourly values themselves, but rather to the differences between the individual values and the means of periods of a month or longer. For this reason also, the study of earth currents must be restricted largely to analyses of the variations in the recorded potentials. Hence while the basic data are compiled in a large group of tables in this volume in the form of mean values for each hour and each day, the discussion of the results will deal only with variations from monthly and yearly means.

Detailed descriptions of the irregular and aperiodic fluctuations which characterize disturbances and magnetic and earth-current storms are too voluminous for publication en masse, and such types of variation cannot readily be summarized. In fact, for studies of disturbances, even hourly mean values are rather meaningless, and data suitable for such studies could hardly be presented except by reproducing the actual grams obtained from the recorder. Therefore the data presented here are those which are of importance in connection with the more regular periodic variations corresponding to time of day, season of the year, or to longer periods such as the sunspot cycle.

The variation most susceptible to analyses and to statistical treatment in general is the solar diurnal variation. Probably no better indication of the normal activity of earth-current flow can be secured. In the sections which follow, the diurnal variation and its changes, modifications, and relation to allied phenomena will be the basis for most of the discussion.

The Solar Diurnal Variation.--The salient features of earth-current flow at Tucson as shown in the diurnal-variation records are summarized in the first 10 tables and in Figures 2 to 10. In this summary and in the yearly means shown in Tables 11 to 54, the results are given in terms of the Northward and Eastward components instead of the Northerly and Eastward components as recorded.

Figure 2 shows the over-all mean curves of diurnal variation for the complete sunspot cycle from 1932 to 1942. The solid curves are for all days on which complete records were obtained (some 3,300 in number), and the dotted curves are for the 10 least disturbed days or the 10 calmest days in each month and so include the data from 1,320 days. (The terms "10 least disturbed days" and "10 calmest days" are identical in meaning and will be used interchangeably or sometimes abbreviated to "calm days" in the text and tables.)

It is found at Tucson, as elsewhere,¹ that a definite and consistent difference exists between the diurnal variation on calm and that on disturbed days; but as will be seen by reference to Figure 2 the difference is small, and for general considerations it is immaterial whether all days or only calm days are considered.

These mean curves, which, as will be seen later, are fairly typical for equinoctial periods, are quite normal for a middle latitude station. The chief features of such a station are a large flow of current toward the equator near noon; two maxima in flow away from the equator, one in the forenoon and the other in the afternoon; and a definite double rotation of the current vector which is large during daylight hours and small at night. This last feature is shown better by the hodograms in Figure 3. The hodograms are formed by joining points which mark

the successive positions of the ends of vectors defining the magnitude and direction of the potential gradient, and hence of current flow, for each hour of the day. It will also be noted that the principal axis of the hodograms is along a line the direction of which is very close to that of the magnetic meridian at Tucson where the declination was slightly under 14° east during this 11-year period. This restriction of current flow symmetrical to, and largely back and forth along, the magnetic meridian is another feature generally found at middle latitude stations. The significance of these main features of the diurnal variation at Tucson in relation to the over-all large scale flow of earth currents and their relationship to the geomagnetic field is discussed in Chapter VI, "Earth Currents," *Physics of the Earth*, Vol. VIII, *Terrestrial Magnetism and Electricity*.¹

Relation to Solar Activity.--Variations in the frequency and intensity of disturbances corresponding to variations in solar activity have been found in all records of earth-current flow. This fact is confirmed by the Tucson records but can be demonstrated only by reference to the original records. There is also a relationship between normal earth-current activity and solar activity quite distinct from disturbance effects, as will be noted by reference again to Figure 3 and to Tables 1, 3, 4, 7, and 8. Taking the range or amplitude of the diurnal-variation curves, or the size of the hodogram, as a measure of normal earth-current activity and the sunspot number as a measure of solar activity, we see in Table 1 that the two follow very similar curves of increase and decrease during the sunspot cycle. The amount of change in earth-current activity which occurs during the sunspot cycle is brought out even more strongly by the hodograms in Figure 3. The central pair are constructed from the same data as the curves in Figure 2, and represent average conditions over the entire sunspot cycle. The hodograms on either side are those for the year 1932, near the sunspot minimum, and the year 1937, at about the time of sunspot maximum. Here again the results for all days (Tables 3, 4) and calm days (Tables 7, 8) are given for comparison, but it is evident from Table 1 and Figure 3 that the same conclusion must be reached whichever set of data is used and that the results indicate a real correlation between normal activity and solar activity quite apart from disturbance effects.

Considerable particular as well as general correlation between sunspot numbers and the range of diurnal variation in earth currents has been shown in the data secured at a number of other stations.⁴ In the case of Tucson, a much closer correlation than that given by this comparison of yearly means is also indicated, but the unusual and rather complicated seasonal variation which occurs at this station makes it somewhat difficult to evaluate.

Seasonal Changes.--At most stations where earth currents have been investigated, the seasonal changes are chiefly changes in intensity, accompanied by only minor shifts in phase or in the phase-relationship between the two components. Such changes are readily described quantitatively. Tucson, however, is located in the so-called "transition belt" where the diurnal variations of the magnetic elements pass from higher-latitude to equatorial type as the centers of the circulatory current-systems in the ionized layers of the upper atmosphere are alternately north (summer) and south (winter) of a given station. For this reason, the seasonal changes in earth-current flow are also much more complex and less readily described and evaluated.

If the Northward component alone is considered, the seasonal change is fairly simple except for a marked increase in amplitude in January. Neglecting this, the seasonal change consists of a large increase in amplitude and a slight advance in the time of maximum flow with increasing height of Sun and a corresponding decrease and retardation during the winter. The behavior of the Eastward component is distinctly different. For this component, the changes in amplitude are small and irregular and the most pronounced feature of the seasonal variation is a large shift in phase which amounts practically to a reversal in direction from winter to summer. Hence to show the seasonal variation adequately, it is necessary to construct monthly hodograms to bring out the changes in the amplitude- and phase-relationships of the two components or to construct harmonic dials which indicate the changes in the more prominent harmonics of the diurnal-variation curves.

Such hodograms and dials are shown in Figures 4 and 5 covering the three year period 1932 to 1934. Hodograms for the complete period, and for the individual years, have been constructed, but those shown here are so typical that further illustration is unnecessary. If desired, hodograms for the full sunspot cycle may be readily drawn from the data in Tables 5, 6, 9, and 10. The results of Fourier analysis covering all the records are given in Table 2. From the latter, harmonic dials can be easily made up.

The center figure in Figure 4 gives the mean for the three year period considered. In type it is very like the graphs for three of the equinoctial months (April, September, and October) although the graph for March, about which more will be said later, is distinctly different. As far as amplitude goes, this mean curve, or the mean curve for any year or period of years, may be rather misleading. This is due to the fact that, because of the phase shifts with season, neither the northward nor the eastward spread of the figure is nearly so great as the mean of the corresponding amplitudes for the individual months.

It might be emphasized here that the graphs for the individual months do not, like the mean graph, give merely a general average obtained from diverse figures, but they are distinctly typical and reproduce themselves with remarkable closeness from year to year. If, for instance, we consider January, which differs from the neighboring months chiefly in amplitude, we find that in every one of the 11 Januarys the size of the graph is greater than the average size of the graphs for the corresponding months of December and February.

Examining the months of the year in turn, we find a very definite change in the type of variation recorded. During the four winter months, the hodograph consists of two nearly circular clockwise loops, a large one during the day and a smaller one at night, with not much difference in the amplitudes of the two components. During the four summer months, the hodograph is decidedly elongated by reason of a large increase in the amplitude of the Northward component and a tendency of the two components to remain in phase particularly during the midday hours. During June and July, the progress of the vector during midday minimum, that is, greatest flow of current toward the south, is counterclockwise instead of clockwise as during the remainder of the year. The graphs for March, April, September, and October are of an intermediate character.

As mentioned before, the records for January and March are anomalous, each for a different reason. January is very conspicuous by reason of an increase in the amplitude of both components, while their phase-relationship does not change appreciably from its regular winter character. During March, on the other hand, the Northward component follows its normal trend toward increasing amplitude with increasing height of Sun, and the peculiarities of the graph are due almost entirely to the Eastward component, which becomes vague and irregular at this time of the year. The significance of these anomalous features has been discussed in detail in a previous paper⁵ and will be treated briefly later in discussion of the relationship of earth currents and the variations in the geomagnetic field.

The seasonal changes for the three-year period 1932 to 1934 are shown in a different manner in Figure 5. The dials are constructed from the constants for the harmonic series $\Sigma c_n(\sin n\theta + \phi_n)$ as determined from the mean monthly and mean annual diurnal-variation data for the three years. Similar constants for the entire 11-year period are shown in Table 2. The dials indicate the seasonal changes in phase and amplitude of the first four harmonics for each component, and all four are found to vary in much the same manner. During the summer months, the two components are in close phase agreement, and the amplitude of the Northward component is much the larger. During the winter, the records for the Northward component show some retardation in the phase-angle and a sharp decrease in amplitude except in the case of January. The harmonics for the Eastward component show much less change in amplitude but a considerably greater retardation in phase. The winter points for the Eastward component will be seen to have dropped back in phase with reference to the corresponding points for the Northward component by something between 45° and 90° so that they fall in the next quadrant back. The seasonal changes are most readily apparent in the large second and third harmonics although the type of change is about the same for all four.

Comparison With Magnetic Records.--The relations between earth-current flow and the geomagnetic field are discussed in some detail in Chapter VI, "Earth Currents," Physics of the Earth.¹ Here it suffices to say that although a number of attempts have been made to determine the exact relationship between the two, no complete and consistent theory has as yet been developed to account for all the observed facts. Nevertheless, certain general correlations have been observed and confirmed. It has been found, for instance, that for middle-latitude stations the diurnal-variation curve of Northward earth-current potential gradient bears a strong resemblance to the first differences in the diurnal-variation curve of Y , the eastward component of the horizontal magnetic field. In other words, a comparison of N and Y and the similarity of the N curve to the derivative of the Y curve indicates a relationship much like that which would exist if the earth currents were the effect of the variations in the magnetic field. If we compare the Eastward earth-current component, E , with X , the northward magnetic force, however, the opposite relationship is suggested since, for these components, the earth-current curve resembles not the derivative of X but the X curve itself inverted. At other stations where the seasonal changes consist mostly of changes in amplitude, there is not much point in comparing anything but mean annual or other long period

values. The unusual seasonal changes at Tucson afford an opportunity to check this feature in more detail.

The general qualitative correspondence described in the preceding paragraph is found to exist at Tucson, as will be seen in Figure 6, not only in the diurnal-variation curve for the whole year but also in those for the months of greatest contrast in type, namely, June and December. On the left in Figure 6 are the diurnal-variation curves for the two components of earth currents, and on the right are the two magnetic curves referred to, namely those of ΔY and $(-X)$. It will be noted that the seasonal changes in the curves for the Northward earth-current component, consisting chiefly of a change in amplitude accompanied by a marked shift in the time of morning maximum, a smaller shift in the time of the noon minimum, and practically no change in the time of the secondary maximum toward evening, are duplicated point by point in the ΔY -curves on the right in Figure 6. The changes shown in the curves for the Eastward earth-current component, on the other hand, are almost entirely changes in phase, the amplitude in June differing but little from that in December, and the same holds for the X -curves which are shown inverted to facilitate the comparison.

The magnetic and earth-current data do not represent the same time interval, the former being taken from the records for the years 1925-1926 and the latter for the years 1932-1934. The seasonal changes are so characteristic and recur so consistently that the non-simultaneity of the records is relatively unimportant.

Further study of the parallelism in the magnetic and earth-current variations, using strictly simultaneous data, has been made in examining the two anomalies referred to in considering the seasonal changes.⁵ When this study was made, concurrent records were available for a period of a little over five years, and in Figure 7 the five-year mean hodograms for the three midwinter months show the earth-current variations and the magnetic variations, the latter projected on three perpendicular planes. Even a casual inspection shows that the January anomaly is just as pronounced in the magnetic records and that it again consists almost entirely of an increase in activity without any significant change in the phase-relationship between the space-components. Comparison of earth-current and magnetic hodograms for two individual winters is shown in Figure 8, 1933-1934, and Figure 9, 1934-1935. In the first of these two years, the anomaly was pronounced, and the amplitude for January was over two and one-half times as great as the average during the two adjacent months. The following winter, 1934-1935, was one of the two in which the anomaly almost disappeared from the earth-current records, and it will be seen that the difference in size has practically disappeared from the magnetic records. The results obtained in the next winter, 1935-1936 (not shown), were quite similar to those in 1933-1934. These records establish without question the reality of the anomaly. Any remote possibility that the results obtained could be attributed to defects in registration is pretty well ruled out by the parallelism in the two sets of records, obtained, as they were, completely independently and with such radically different instruments as galvanometers and magnetic variometers.

The second departure from regularity in the Tucson variations occurs in March. It is less pronounced than the winter anomaly and also less definite and consistent in its recurrence. As will be seen in Figure 10, which

shows hodograms for the equinoctial months, the Northward component of earth current shows very little that is unusual and follows its normal trend toward increasing amplitude with increasing height of Sun. The peculiarities of the March hodograms are due almost entirely to the Eastward component which seems just to run out and to become very erratic. The shape of the hodogram is more nearly like those for the midsummer months than it is like those for the other equinoctial months shown for comparison. The graphs for individual months of March are less similar to each other than are those for any other month of the year and examination of the diurnal variation on individual days rather than individual months shows still greater differences even after allowing for effects of disturbance and variations with solar activity. Some days resemble the other equinoctial months, some the summer type, and others are only like themselves. For this reason, only the mean hodograms covering the five-year period for which the corresponding magnetic data are available have been shown. Here again the parallelism with the magnetic variation shown only in horizontal projection is striking. As should be expected, Y , like the Northward earth-current component, is nearly normal, while X , like the Eastward earth-current vector, is reduced almost to the point of disappearance.

Simple and satisfactory explanations of these anomalies do not present themselves. It might, however, be pointed out that the winter anomaly might be accounted for by the assuming of the existence of a region of unusually high conductivity in the ionosphere so situated that the circulatory current system passes into this area when it reaches its southernmost position near the time of the winter solstice. Similarly, the anomaly in March may be due to erratic shifting of the latitude of the current center in the ionosphere to the northward and back during that month.

Variations With Periods Longer Than One Day.³--In addition to their use in the detailed examination of the solar diurnal variation and its changes from month to month and year to year, as summarized in the preceding paragraphs, the Tucson records have been used in studies of other phases of earth-current flow. One of these studies has dealt with variations having periods longer than one day and may be discussed briefly.

Examination of the records for nearly six years, May, 1931, to March, 1936, shows that the daily mean values as well as the diurnal variation recorded on characteristically disturbed and calm days differ consistently by a small amount. This suggests that a part of the current flowing during disturbances or magnetic storms is unidirectional for the day or longer and is the first definite evidence of a component in earth-current flow with a period longer than one day. The magnitude of the effect is small, not more than a few per cent of the range of diurnal variation, and components of this long period would seem to be of relatively minor importance in earth-current studies.

Lunar Diurnal Variations.--Lunar diurnal variation (L) is important because of its bearing on the critical appraisal of the several theories advanced to account for magnetic variations and earth-current flow. Preliminary evaluation of the lunar diurnal variation at Tucson has been carried out⁶ by both the method of Chapman^{7,8} and that of Egedal.⁹ The records used were those for a single year, 1932, and a definite lunar diurnal variation of markedly double period was found. Its magnitude is

about one-fifth that of the solar diurnal variation. Because of the large and complex seasonal changes at Tucson, it was found that a single year's record was not enough to demonstrate accurately the changes in L with the phase of the Moon. However, by Egedal's method, it

was possible to show that the diurnal variation determined for daylight hours alone differs but slightly from that determined for periods of darkness. This finding is in agreement with the results obtained by Egedal⁹ for Ebro and other middle-latitude stations.

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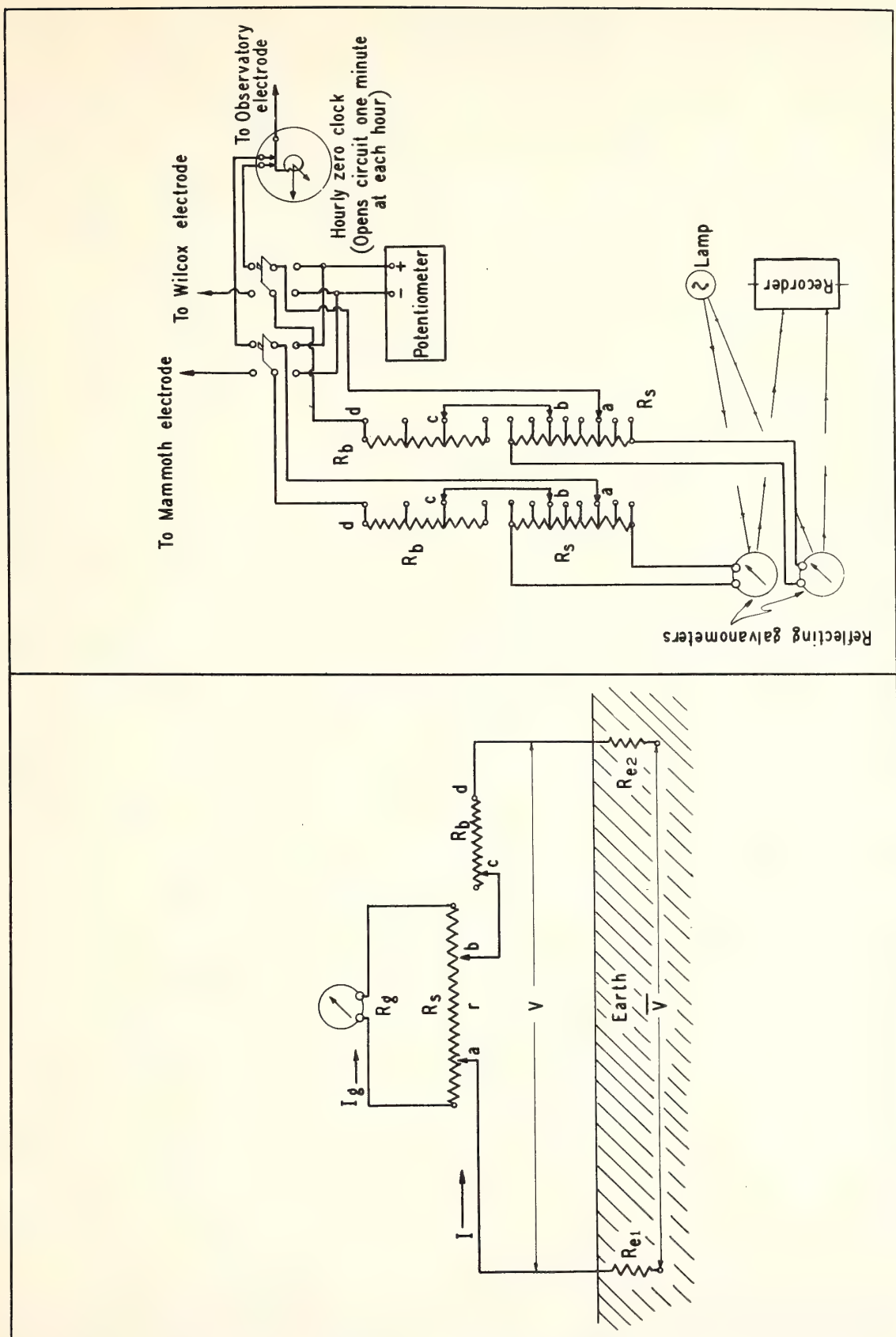


Fig. 1. Simple galvanometer circuit for earth-current observations

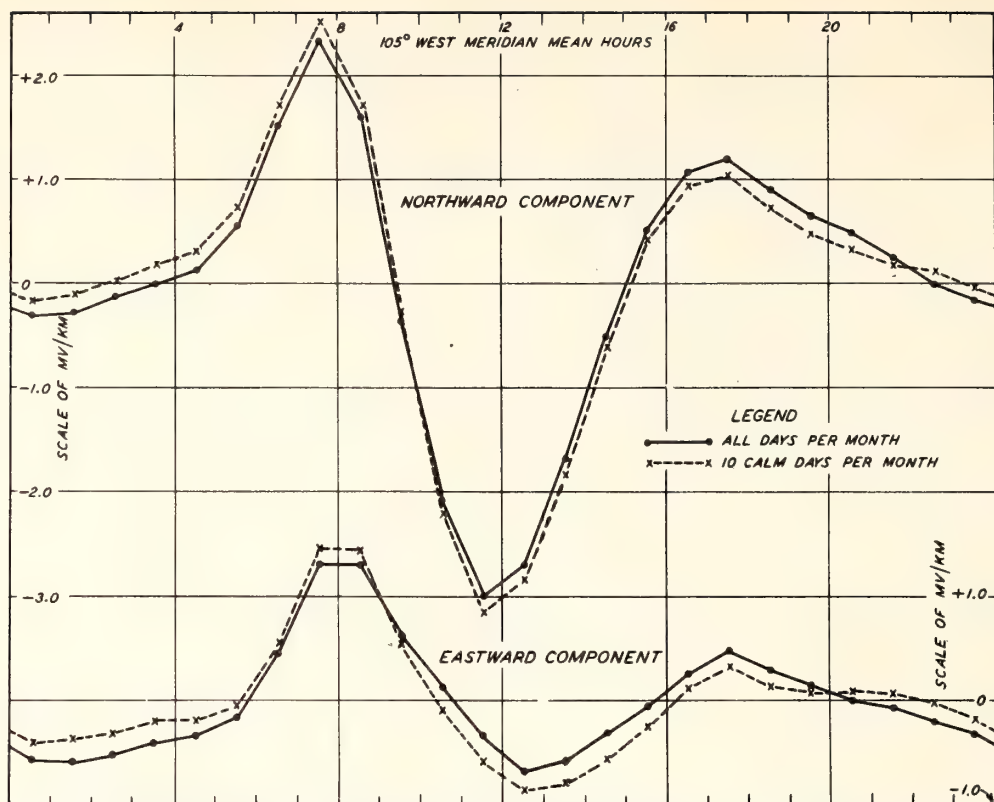


Fig. 2. Diurnal variation in earth-current potential gradient for all days and for 10 calmest days in each month at Tucson; means for 11-year period, 1932 to 1942

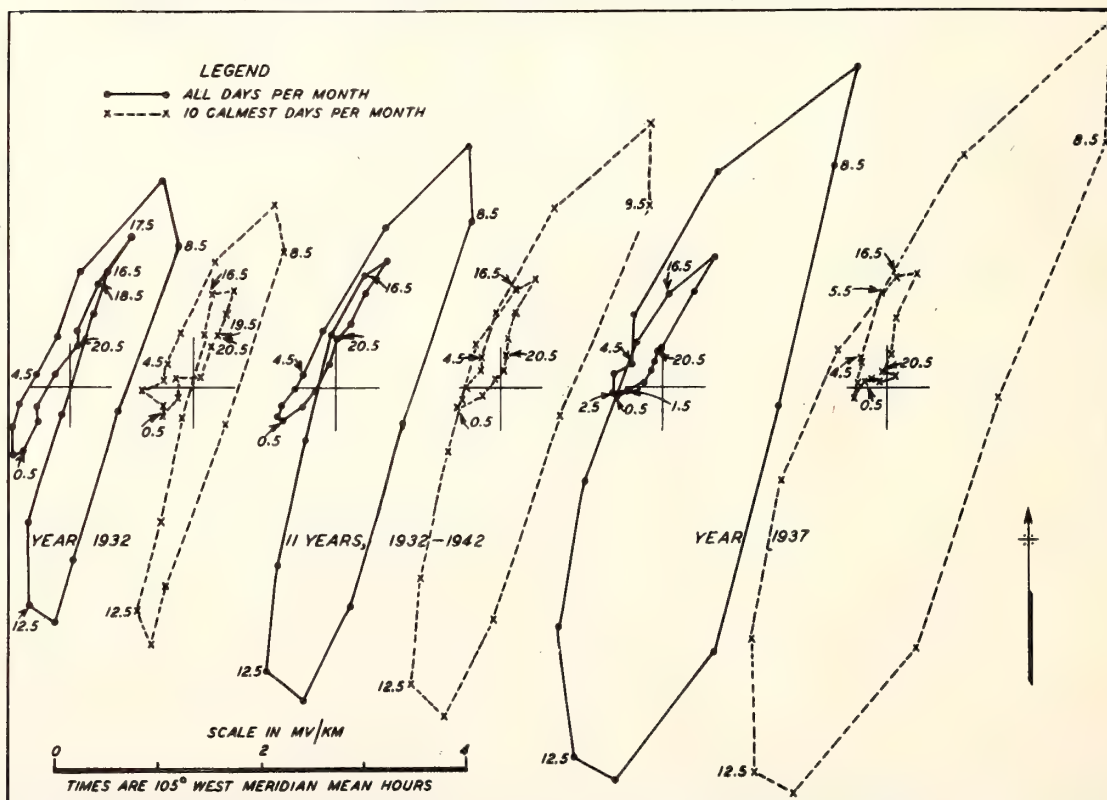


Fig. 3. Mean hodographs of diurnal variation in earth-current potential gradient for all days and for 10 calmest days in each month at Tucson, for years 1932 and 1937, and for 11-year period, 1932 to 1942

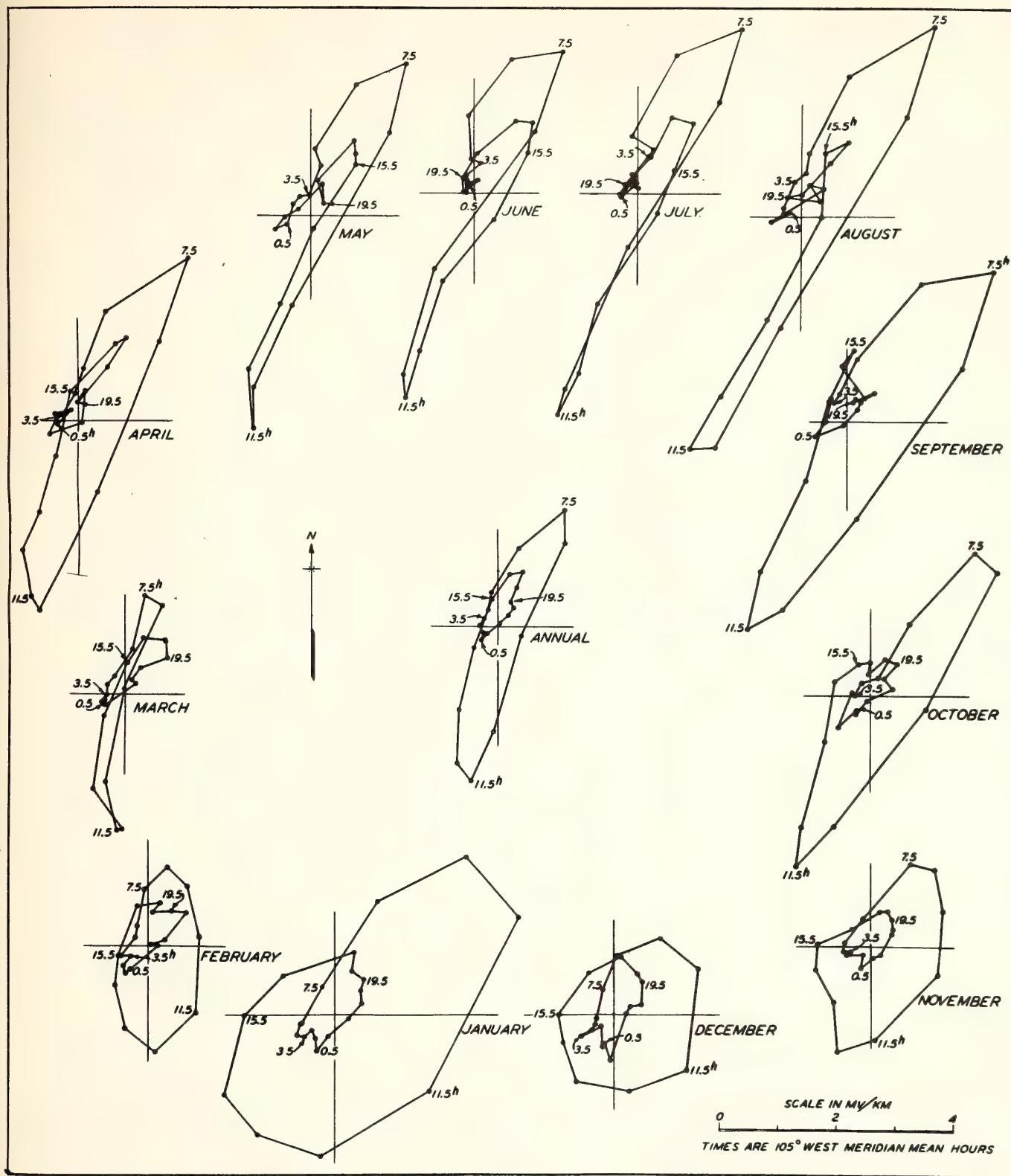


Fig. 4. Seasonal change in earth-current diurnal variation at Tucson Magnetic Observatory, 10 calm days per month for three-year period, 1932 to 1934

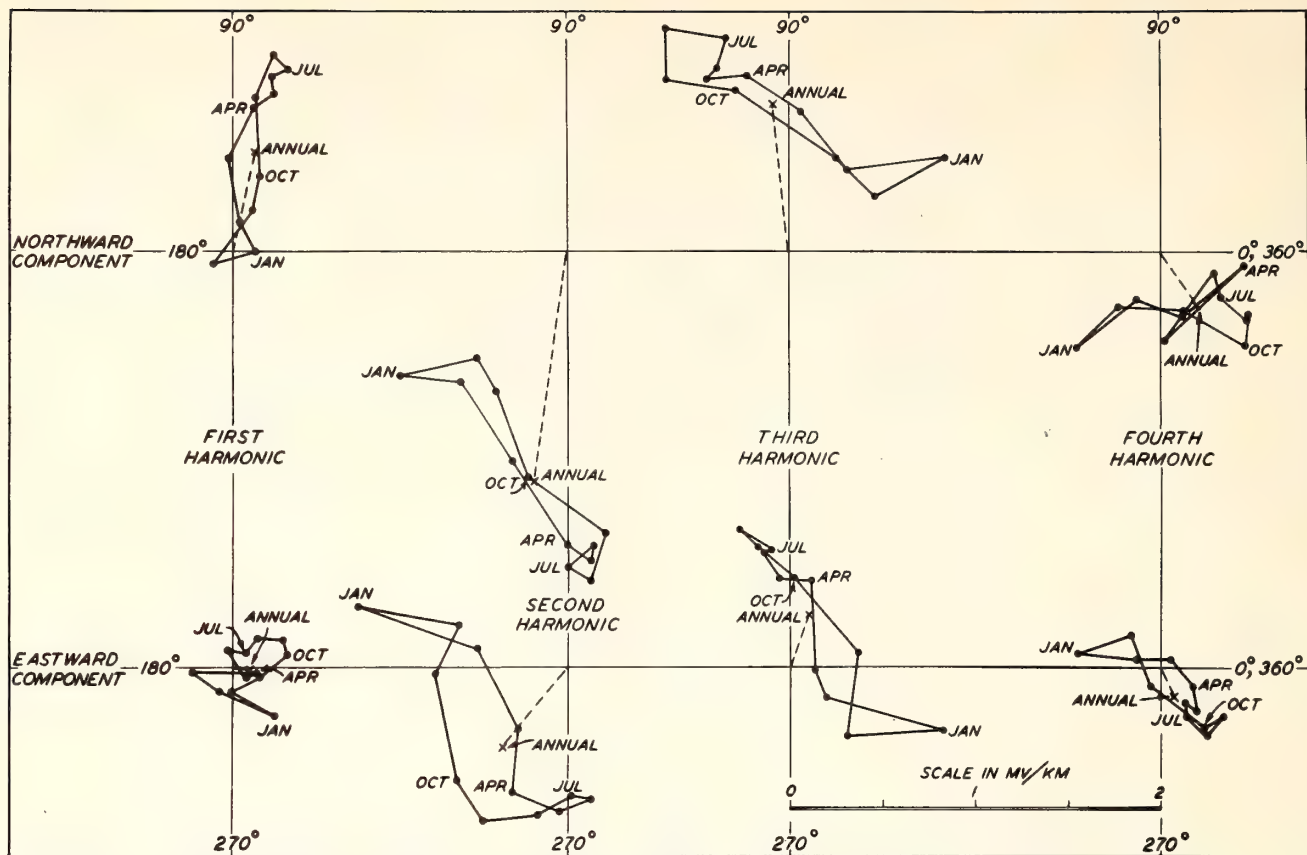


Fig. 5. Seasonal change in phase and amplitude, principal harmonics of diurnal-variation curve, earth-current potential gradient at Tucson Magnetic Observatory -- mean values shown for three year period, 1932 to 1934, 10 calm days per month--0° corresponds to midnight 105° west meridian mean hours

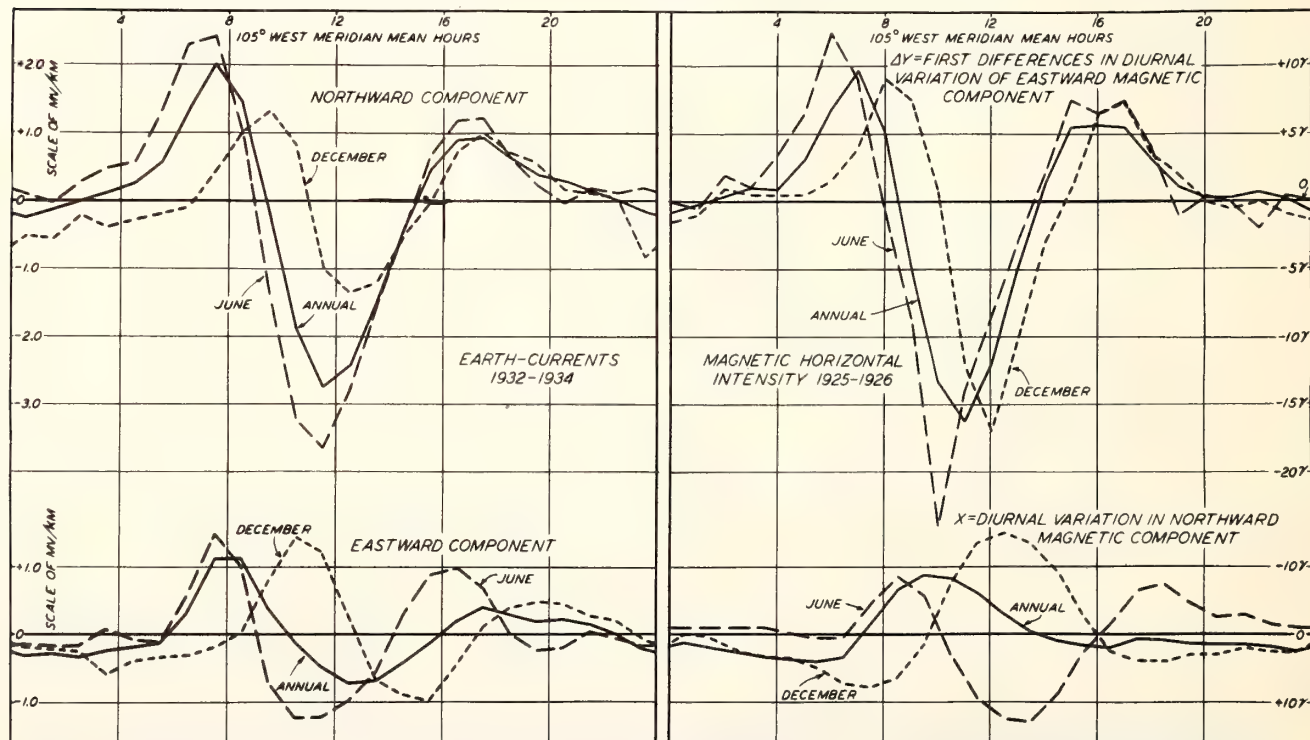


Fig. 6. Calm day diurnal variation in June and December at Tucson Magnetic Observatory, showing parallel changes in earth-current potential gradient and magnetic horizontal intensity

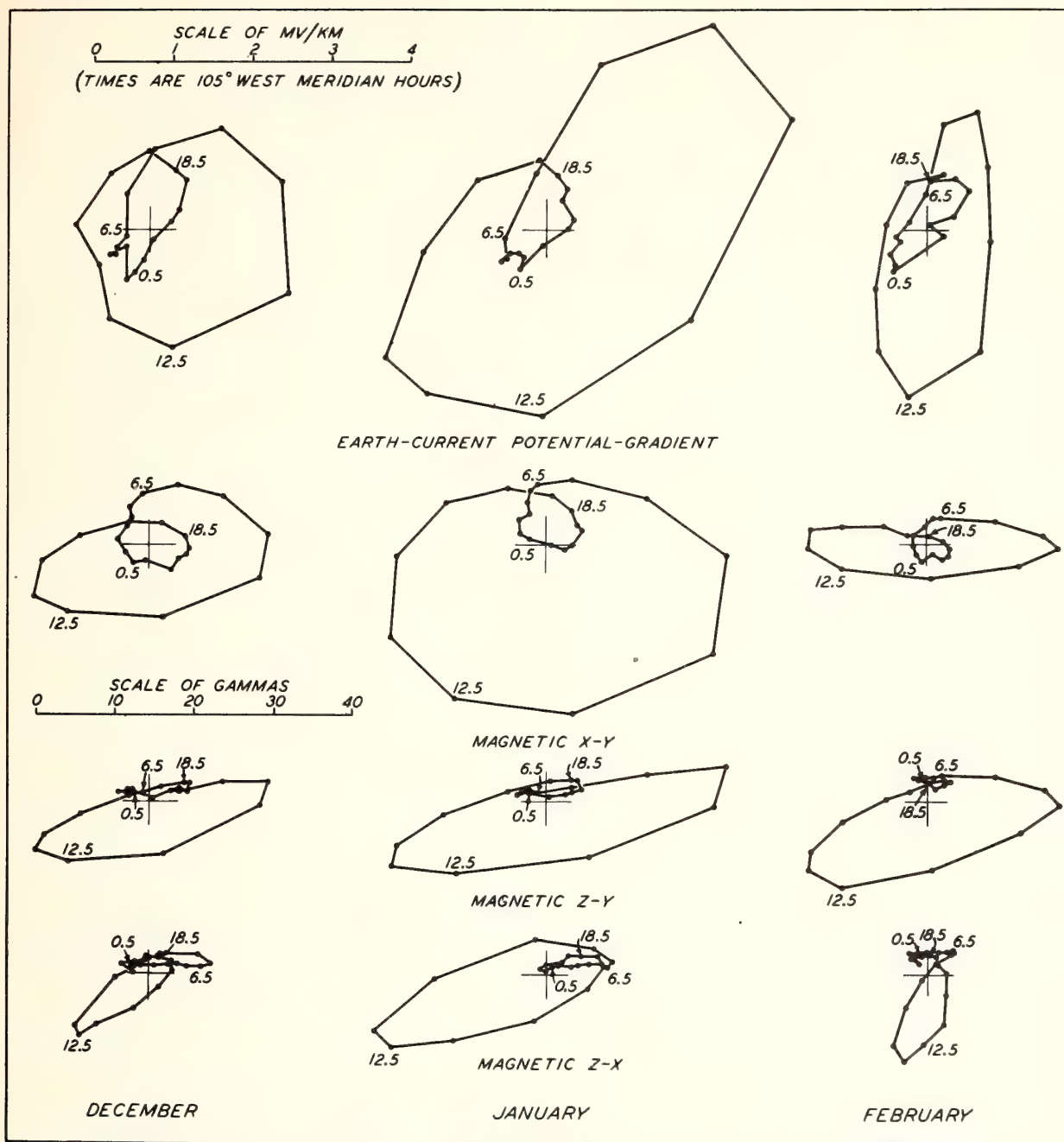


Fig. 7. Hodograms showing winter anomaly in diurnal variation at Tucson Magnetic Observatory, 5-year mean values for December, January, and February, in the period December, 1931, to February, 1936

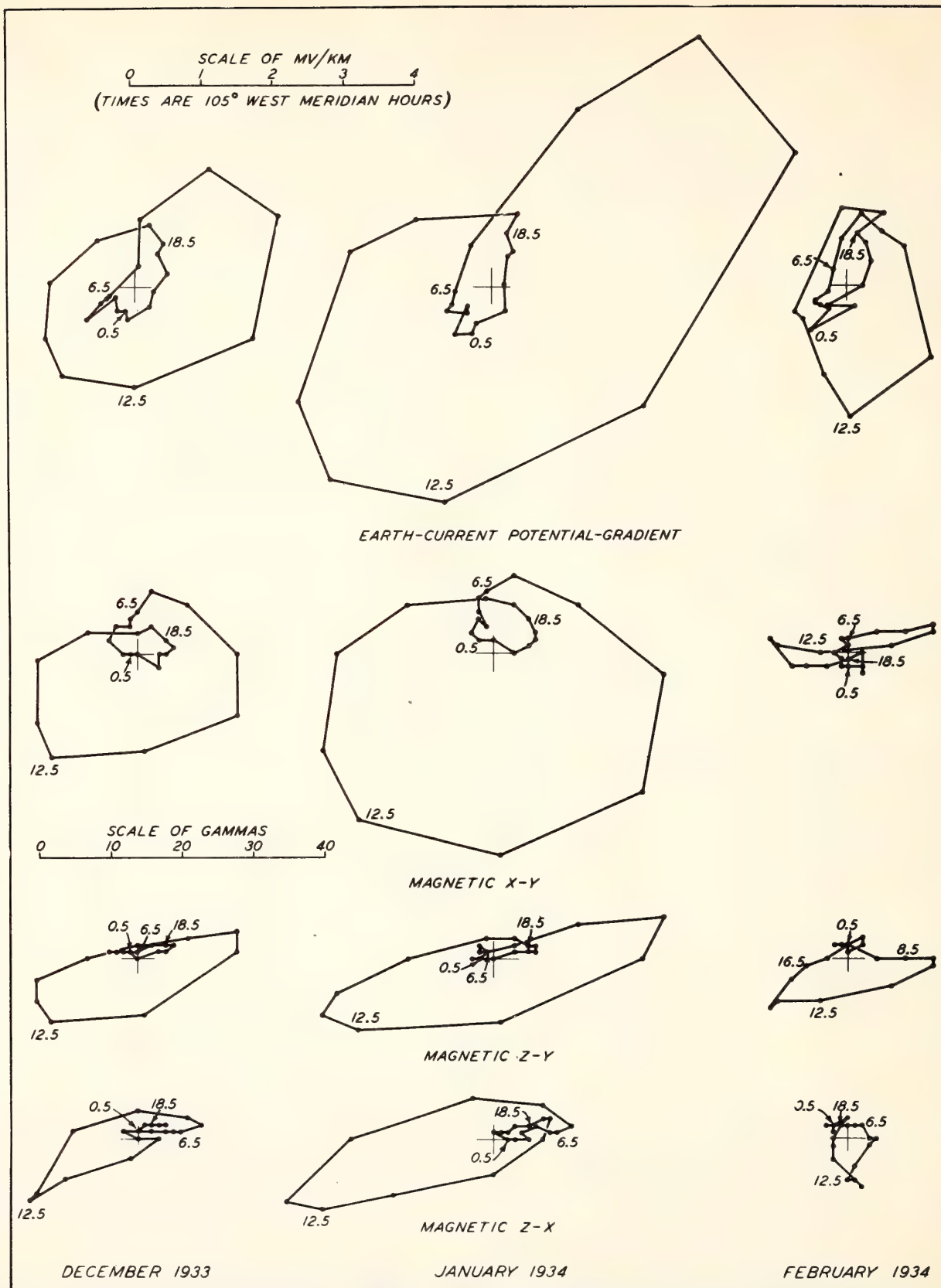


Fig. 8. Hodograms showing pronounced winter anomaly (1933-1934) in diurnal variation at Tucson Magnetic Observatory

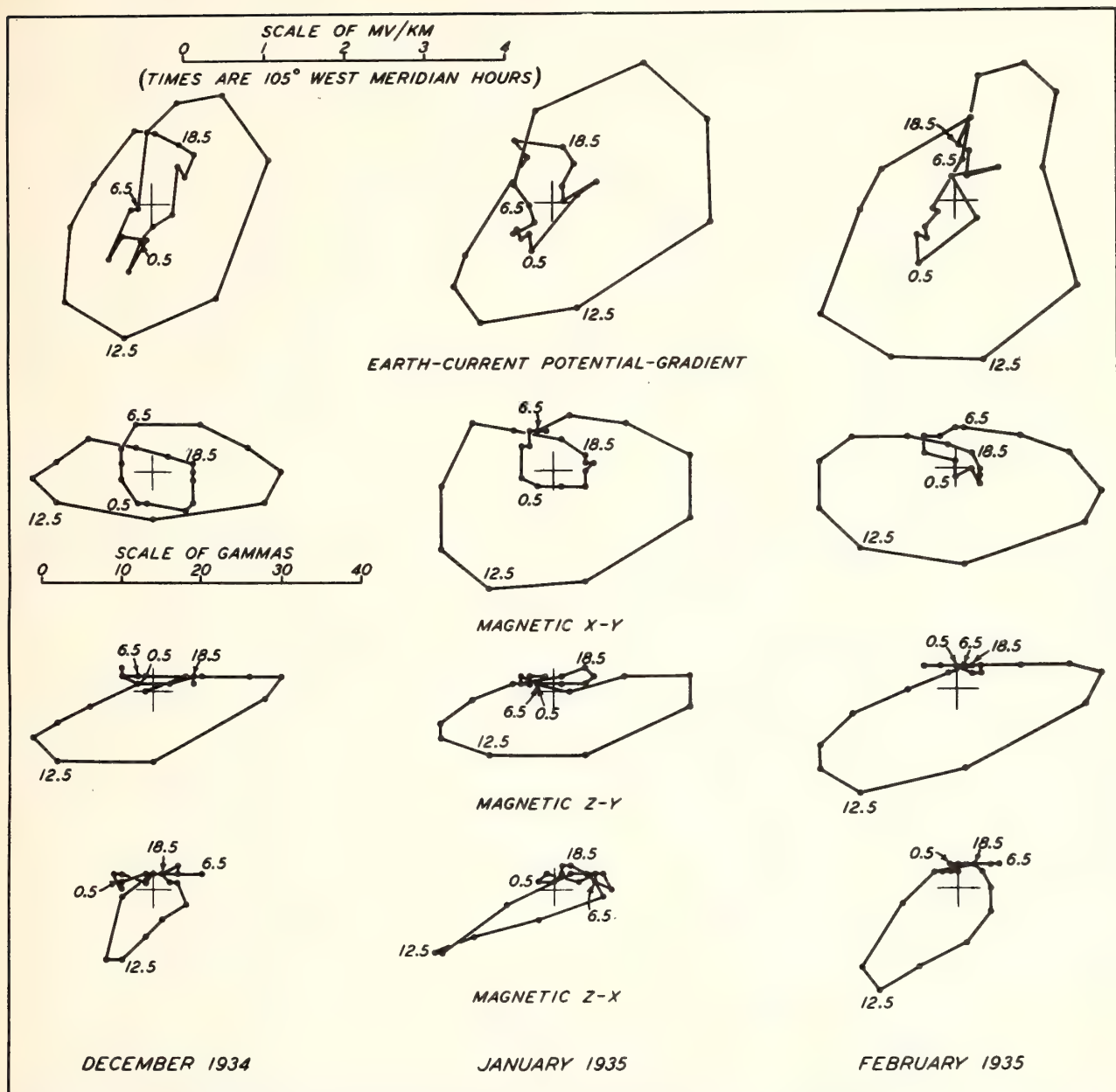


Fig. 9. Hodograms showing absence of winter anomaly (1934-1935) in diurnal variation at Tucson Magnetic Observatory

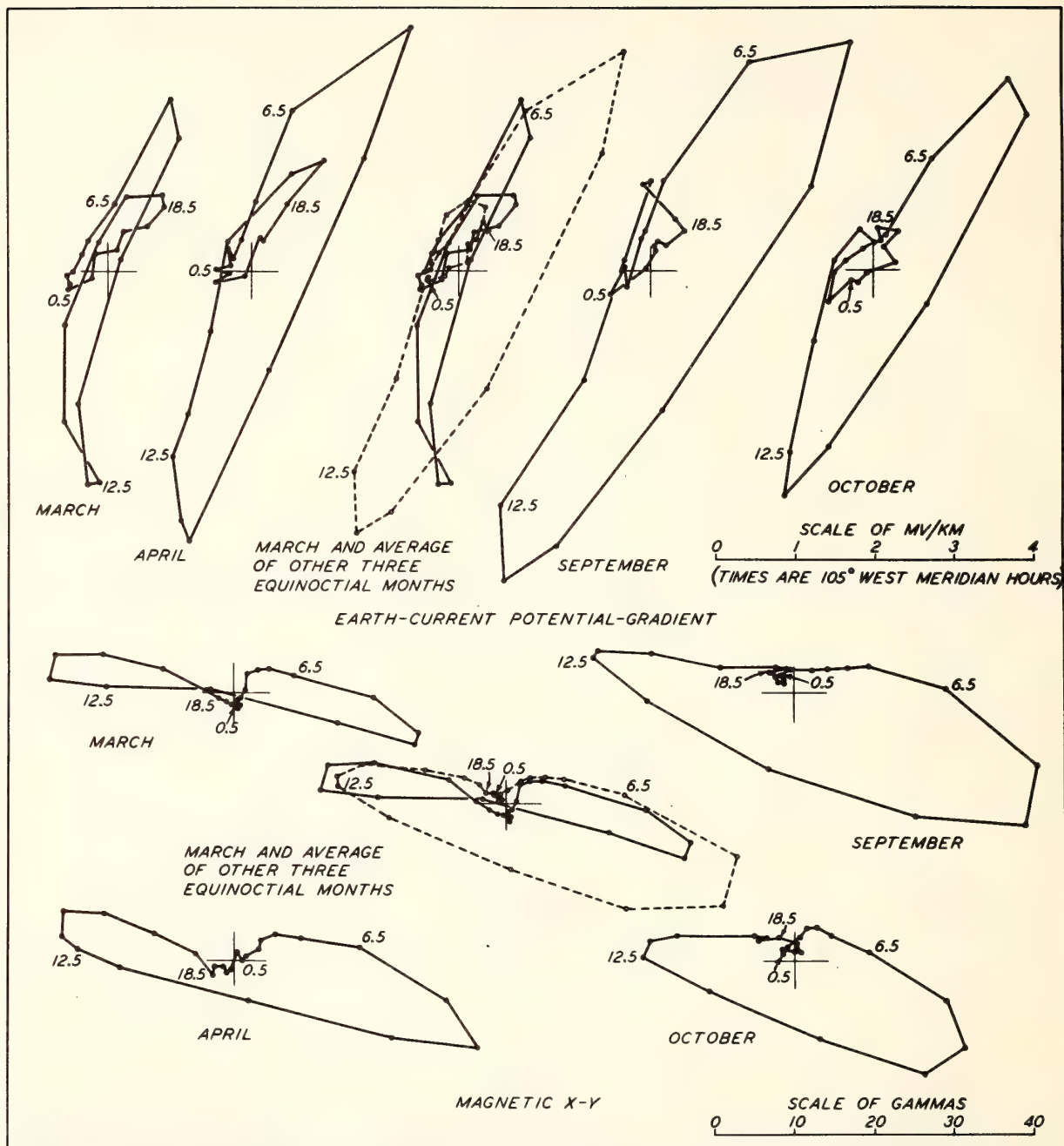


Fig. 10. Hodograms showing March anomaly in diurnal variation at Tucson Magnetic Observatory, 5-year mean values, March, April, September, and October, 1932 to 1936

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Table 1. Annual means in sunspot number and in range of earth-current potential gradient at Tucson Magnetic Observatory, 1932-1942
(Potential gradient in hundredths of millivolts)

Year	Sunspot Number	All days		Ten calm days	
		N	E	N	E
1932	11.1	410	161	419	136
1933	5.7	444	168	492	209
1934	8.7	464	187	515	227
1935	36.1	466	181	508	211
1936	79.7	633	218	645	216
1937	114.4	682	284	733	355
1938	109.6	678	266	697	281
1939	88.8	617	254	638	268
1940	67.8	469	238	547	245
1941	47.5	492	211	550	241
1942	30.6	462	206	487	197
Mean	54.5	532	201	566	231

Table 2. Fourier analysis of monthly means of diurnal variations of earth-current gradients at Tucson Magnetic Observatory, for 10 calmest days in each month, 1932-1942
Northward component

Month	Amplitudes				Phase-angles			
	c_1	c_2	c_3	c_4	ϕ_1	ϕ_2	ϕ_3	ϕ_4
	mv/km	mv/km	mv/km	mv/km	°	°	°	°
Jan	0.13	1.32	1.04	0.64	43	217	37	236
Feb	0.34	1.04	0.63	0.35	93	235	62	254
Mar	0.65	1.38	0.87	0.38	73	251	88	301
Apr	1.02	1.73	1.02	0.49	64	260	98	350
May	0.98	1.65	1.06	0.45	74	274	106	352
Jun	0.95	1.74	1.32	0.40	79	280	109	321
Jul	1.11	2.08	1.44	0.38	78	270	105	316
Aug	1.23	2.12	1.66	0.66	71	274	117	332
Sep	0.96	1.64	1.34	0.68	63	271	116	326
Oct	0.59	1.27	1.05	0.65	67	261	89	327
Nov	0.32	1.09	0.60	0.37	75	245	83	294
Dec	0.08	0.98	0.73	0.42	50	226	42	244
Ann	0.64	1.37	0.89	0.34	68	258	96	311

Eastward component

Month	Amplitudes				Phase-angles			
	c_1	c_2	c_3	c_4	ϕ_1	ϕ_2	ϕ_3	ϕ_4
	mv/km	mv/km	mv/km	mv/km	°	°	°	°
Jan	0.50	1.23	0.94	0.58	332	174	347	174
Feb	0.20	0.58	0.27	0.21	282	184	343	181
Mar	0.12	0.60	0.19	0.13	297	225	90	12
Apr	0.34	0.79	0.41	0.22	354	228	64	343
May	0.11	0.73	0.55	0.33	300	267	101	314
Jun	0.09	0.79	0.69	0.34	134	286	109	310
Jul	0.09	0.91	0.86	0.35	72	277	98	301
Aug	0.38	0.93	0.89	0.45	20	253	106	301
Sep	0.54	1.00	0.64	0.50	10	232	90	315
Oct	0.34	0.81	0.49	0.32	347	221	95	316
Nov	0.28	0.77	0.24	0.11	336	187	23	244
Dec	0.33	0.82	0.54	0.24	325	161	330	161
Ann	0.23	0.64	0.37	0.15	348	224	74	294

ANNUAL MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

[illegible]

11-YEAR MEAN VALUES BY MONTHS, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

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DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

ANNUAL MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

YEAR	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	RANGE
TABLE 7																									
NORTHWARD COMPONENT, 10 DAYS																									
1932	-24	-17	-1	6	22	52	+120	+174	+126	-38	-189	-245	-216	-130	-26	+51	+87	+94	+70	+39	+39	+10	+10	-11	419
1933	-29	-12	4	11	27	60	+140	+215	+144	0	-188	-277	-251	-157	-46	+38	+95	+98	+12	+43	+27	+22	0	-7	492
1934	-22	-14	-2	15	31	61	+144	+217	+162	-18	-189	-298	-260	-156	-43	+52	+92	+91	+61	+39	+29	+24	-2	-24	515
1935	-24	-11	-105	+23	+25	+59	+146	+229	+167	-2	-190	-279	-261	-160	-49	+38	+82	+100	+55	+24	+23	+11	+9	-8	508
1936	2	-6	9	24	43	77	+196	+296	+206	-42	-257	-349	-310	-208	-90	+22	+76	+103	+84	+54	+35	+15	+14	+9	645
1937	4	-8	5	27	29	96	+222	+346	+234	-10	-250	-387	-368	-238	-86	+39	+105	+108	+66	+32	+17	+14	+4	+7	733
1938	-2	-8	0	23	26	86	+220	+316	+232	-23	-255	-381	-349	-246	-101	+28	+94	+113	+92	+54	+41	+19	+20	+2	697
1939	-21	-28	-3	26	34	+103	+206	+293	+224	-29	-230	-345	-323	-230	-109	+15	+92	+104	+89	+68	+32	+26	+13	+3	638
1940	-18	-16	+10	15	20	66	+154	+241	+144	-47	-222	-306	-270	-182	-65	+50	+104	+110	+65	+40	+40	+24	+15	+16	547
1941	-31	-2	-4	4	34	74	+166	+238	+134	-56	-243	-312	-253	-155	-48	+61	+112	+114	+79	+50	+37	+20	+9	-18	550
1942	-29	-26	-14	12	20	64	+161	+198	+132	-48	-213	-289	-247	-135	-19	+54	+104	+99	+85	+55	+24	+27	-2	-18	487
MEANS	-18	-13	+1	17	28	73	+170	+251	+173	-28	-221	-315	-283	-182	-62	+41	+95	+103	+73	+45	+31	+19	+8	-4	566
TABLE 8																									
EASTWARD COMPONENT, 10 DAYS																									
1932	-32	-32	-48	-30	-27	-14	+21	+79	+88	+32	-26	-40	-46	-34	-12	+11	+19	+40	+33	+19	+19	+8	-19	-16	136
1933	-39	-26	-22	-25	-16	-15	+31	+122	+117	+39	+2	-43	-85	-87	-50	-28	+26	+40	+22	+16	+19	+14	+11	-19	209
1934	-23	-31	-32	-19	-17	-12	+46	+138	+134	+43	-10	-64	-89	-87	-67	-25	+12	+43	+30	+23	+30	+22	+8	-32	227
1935	-34	-32	-28	-17	-17	-17	+40	+128	+119	+49	-75	-47	-83	-64	-40	-10	+10	+31	+6	-5	+2	+6	-1	-2	211
1936	-43	-39	-36	-21	-17	-4	+45	+150	+150	+53	-16	-64	-66	-64	-46	-24	+10	+34	+11	+9	+4	-3	-14	-15	216
1937	-23	-35	-28	-22	-24	-5	+75	+219	+211	+107	+24	-92	-134	-136	-105	-47	+7	+26	+5	+2	-3	+6	-6	-15	355
1938	-49	-42	-47	-19	-14	-3	+62	+181	+179	+74	-4	-44	-100	-90	-54	-20	+19	+26	+3	0	-11	-20	-12	-18	281
1939	-46	-57	-28	-16	-26	+5	+72	+153	+171	+84	+34	-25	-95	-97	-86	-60	+10	+11	+8	+11	+2	-11	-1	-17	268
1940	-40	-34	-19	-4	13	+10	+63	+143	+152	+58	-38	-82	-93	-88	-63	-20	+3	+36	+12	+6	-2	+3	+12	+1	245
1941	-53	-29	-26	-22	-1	+24	+88	+155	+131	+43	-38	-75	-86	-74	-53	-14	+14	+36	+8	0	+2	+5	-14	-40	241
1942	-67	-48	-54	-26	-34	-9	+52	+129	+116	+48	-9	-53	-68	-51	-23	-9	+41	+36	+26	+23	+17	+17	-13	-37	197
MEANS	-41	-37	-33	-20	-19	-4	+54	+145	+143	+57	-9	-57	-86	-79	-54	-22	+16	+33	+15	+9	+7	+4	-4	-19	231

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

11-YEAR MEAN VALUES BY MONTHS, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	RANGE
												TABLE 9													
												NORTHWARD COMPONENT, 10 DAYS													
JAN	- 48	- 42	- 35	- 34	- 28	- 20	- 1	+111	+244	+274	+106	-193	-295	-237	-169	- 18	+ 89	+101	+ 77	+ 73	+ 58	+ 30	0	- 27	569
FEB	- 31	- 41	- 35	- 15	- 15	+ 8	+ 34	+115	+151	+ 92	- 34	-167	-238	-174	- 82	+ 16	+ 69	+ 80	+ 85	+ 74	+ 60	+ 32	+ 18	- 5	389
MAR	- 20	- 20	- 2	0	+ 20	+ 45	+123	+255	+192	- 3	-177	-281	-278	-199	- 84	+ 25	+ 91	+ 89	+ 85	+ 64	+ 50	+ 23	+ 17	- 5	536
APR	0	+ 7	+ 10	+ 25	+ 41	+ 93	+219	+344	+199	- 86	-323	-348	-265	-224	-129	- 11	+ 91	+150	+109	+ 60	+ 32	+ 12	+ 2	- 1	692
MAY	- 4	+ 4	+ 18	+ 50	+ 79	+136	+247	+290	+118	-166	-362	-372	-248	-153	- 54	+ 49	+ 97	+113	+ 77	+ 25	+ 21	+ 13	+ 8	+ 12	662
JUN	+ 2	+ 8	+ 28	+ 54	+ 84	+158	+263	+280	+ 81	-140	-380	-413	-316	-187	- 46	+ 77	+144	+141	+ 77	+ 21	- 8	+ 1	+ 13	+ 16	693
JUL	- 12	- 3	+ 3	+ 50	+ 70	+144	+278	+306	+194	-116	-398	-466	-393	-234	- 52	+ 92	+176	+172	+110	+ 17	+ 6	+ 21	+ 32	+ 11	772
AUG	+ 8	+ 7	+ 20	+ 57	+ 85	+143	+327	+425	+198	-233	-470	-382	-219	- 13	+116	+146	+127	+ 26	+ 9	+ 24	+ 28	+ 19	+ 11	+ 11	895
SEP	+ 3	+ 15	+ 37	+ 42	+ 30	+126	+287	+357	+155	-128	-326	-403	-328	-149	- 3	+102	+ 96	+ 40	+ 14	+ 24	+ 25	+ 11	+ 5	- 4	760
OCT	- 8	- 21	+ 3	+ 8	+ 1	+ 48	+184	+281	+188	- 66	-235	-311	-246	-111	+ 20	+ 42	+ 43	+ 36	+ 68	+ 51	+ 33	+ 9	+ 2	- 14	592
NOV	- 58	- 35	- 15	- 12	- 8	+ 22	+ 83	+187	+153	+ 48	- 92	-206	-218	-127	- 40	+ 12	+ 44	+ 83	+ 83	+ 62	+ 40	+ 38	- 3	- 16	405
DEC	- 48	- 47	- 31	- 27	- 26	- 16	+ 3	+ 79	+171	+185	+ 63	-152	-196	-161	- 79	- 16	+ 55	+100	+ 83	+ 67	+ 24	+ 14	- 10	- 31	381
MEANS	- 18	- 14	0	+ 17	+ 28	+ 74	+171	+252	+170	- 28	-219	-315	-284	-181	- 61	+ 41	+ 95	+103	+ 74	+ 46	+ 30	+ 19	+ 8	- 4	567
												TABLE 10													
												EASTWARD COMPONENT, 10 DAYS													
JAN	- 39	- 37	- 41	- 48	- 48	- 33	- 38	+ 10	+121	+258	+322	+160	- 53	-194	-247	-169	- 56	+ 18	+ 7	+ 31	+ 30	+ 28	+ 19	- 7	569
FEB	- 50	- 54	- 45	- 34	- 36	- 14	+ 2	+ 14	+ 57	+106	+101	+ 73	- 29	- 68	- 71	- 45	- 17	+ 24	+ 22	+ 30	+ 36	+ 23	+ 9	- 8	177
MAR	- 57	- 56	- 52	- 38	- 24	+ 5	+ 47	+121	+126	+ 16	- 45	- 35	- 13	- 41	- 60	- 34	+ 16	+ 44	+ 51	+ 40	0	+ 16	+ 2	- 23	186
APR	- 47	- 24	- 35	- 11	- 13	0	+ 59	+210	+178	+ 55	- 42	- 64	- 75	-100	- 80	- 66	- 7	+ 59	+ 44	+ 12	- 4	- 7	- 25	- 36	310
MAY	- 44	- 39	- 14	+ 5	+ 10	+ 1	+ 71	+184	+136	- 27	-116	-127	-114	- 38	+ 15	+ 54	+ 68	+ 61	+ 12	+ 2	- 1	- 30	- 36	- 36	311
JUN	- 44	- 20	- 5	+ 14	- 1	- 5	+ 72	+172	+ 95	- 76	-166	-165	- 97	- 37	+ 51	+114	+113	+ 75	+ 13	- 15	- 20	- 16	- 16	- 34	338
JUL	- 44	- 20	- 28	+ 10	+ 2	- 4	+ 67	+181	+154	- 34	-167	-193	-156	- 64	+ 37	+115	+152	+104	+ 24	- 30	- 13	- 28	- 6	- 33	374
AUG	- 28	- 35	- 27	- 7	+ 9	+ 12	+121	+290	+223	- 20	-152	-190	-160	- 88	0	+ 35	+ 64	+ 35	- 12	- 24	- 1	- 2	+ 1	- 25	480
SEP	- 43	- 30	- 30	- 6	- 16	- 28	+148	+298	+235	+ 63	- 93	-184	-172	- 93	- 58	- 16	- 4	+ 5	- 16	- 12	- 10	- 6	- 15	- 2	482
OCT	- 39	- 53	- 49	- 50	- 30	+ 4	+103	+184	+204	+ 73	- 29	- 95	-108	- 68	- 37	- 34	- 7	- 2	+ 8	+ 21	+ 16	+ 14	- 8	- 22	312
NOV	- 39	- 47	- 48	- 41	- 43	- 11	+ 17	+ 87	+126	+124	+ 98	+ 5	- 61	- 73	- 81	- 90	- 52	- 9	+ 15	+ 21	+ 26	+ 36	+ 13	0	216
DEC	- 14	- 25	- 28	- 36	- 33	- 27	- 19	- 10	+ 62	+151	+191	+128	+ 7	- 88	-123	-127	- 81	- 23	+ 8	+ 32	+ 23	+ 23	+ 12	- 9	318
MEANS	- 41	- 37	- 33	- 20	- 19	- 4	+ 54	+145	+143	+ 57	- 8	- 57	- 86	- 79	- 54	- 22	+ 16	+ 33	+ 15	+ 9	+ 7	+ 4	- 4	- 20	231

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1932

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

1932

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 11																								
NORTHWARD COMPONENT, ALL DAYS																								
JAN	-113	-75	-76	-95	-9	-42	+18	+73	+141	+205	+144	-113	-243	-213	-122	+37	+98	+124	+132	+63	+90	+32	-17	-51
FEB	-54	-89	-29	-59	-46	+52	+8	+54	+88	+140	+50	-88	-195	-176	-107	+24	+104	+112	+124	+65	+58	+30	+11	-73
MAR	-68	-49	-29	-12	-25	+24	+98	+203	+224	+53	-185	-249	-272	-183	-51	+89	+116	+208	+97	+95	+3	-5	-97	+4
APR	-26	-74	-8	+6	+36	+85	+188	+203	+68	-129	-249	-220	-170	-112	-36	+61	+137	+172	+123	+64	+25	-51	-75	-18
MAY	-80	-23	-18	-60	+99	+124	+187	+218	+76	-139	-263	-291	-227	-137	-46	+53	+80	+143	+88	+26	+101	+48	-2	-46
JUN	-27	+9	+18	+35	+93	+127	+214	+229	+48	-154	-325	-350	-261	-129	-5	+80	+130	+148	+78	+20	+1	-16	+10	+27
JUL	-10	+2	-17	+64	+75	+101	+217	+284	+144	-160	-362	-394	-307	-147	+8	+83	+137	+123	+66	+16	+15	+27	+35	+8
AUG	-69	-35	-22	+12	+80	+100	+223	+299	+96	-143	-396	-382	-285	-153	+41	+97	+156	+107	+59	+55	+20	+72	+51	+19
SEP	-24	-41	+3	+64	+48	+80	+142	+239	+66	-181	-266	-298	-181	-65	+40	+120	+71	+101	+77	+6	+19	+12	-8	-29
OCT	-32	-66	-99	+20	-14	+22	+97	+182	+120	-98	-269	-233	-107	+16	+77	+111	+61	+64	+86	+57	+57	+19	+21	-90
NOV	+4	-64	-23	-13	-47	-32	+20	+146	+130	+36	-61	-167	-172	-83	-18	+36	+63	+82	+81	+89	+30	+36	-15	-44
DEC	-97	-99	-15	-45	-32	-34	-63	+20	+86	+96	+47	-13	-54	-85	-61	-13	+85	+150	+120	+72	+24	-12	-14	-48
MEANS	-50	-50	-24	-2	+22	+56	+112	+179	+107	-38	-176	-231	-209	-126	-24	+64	+104	+129	+94	+52	+36	+16	-9	-28
TABLE 12																								
EASTWARD COMPONENT, ALL DAYS																								
JAN	-50	-25	-72	-103	-62	-59	-63	+6	+145	+135	+306	+155	-46	-143	-166	-87	+20	+17	+11	+21	+59	+18	+9	-28
FEB	-48	-62	-37	-32	-115	-17	-37	-26	+29	+135	+149	+132	+48	-56	-92	-55	-15	+12	+47	+124	+56	+5	+1	-42
MAR	-57	-54	-38	-79	-51	+12	-24	+34	+143	+125	+13	+56	-12	-90	-20	+23	+65	+111	+84	-5	-51	-24	-160	+6
APR	-19	-47	-85	-47	-15	+45	+45	+145	+98	-8	-8	-84	-69	+9	+26	+129	+181	+37	-86	-37	-53	-95	-64	
MAY	-102	-83	-26	-13	+23	-1	+57	+123	+50	-41	-73	-61	-54	-8	+59	+87	+68	+128	-14	+1	+18	-41	-65	-43
JUN	-74	-25	-37	+3	+9	-14	+51	+99	+53	-21	-119	-95	-74	-17	+66	+93	+104	+115	+7	-33	-15	-32	-41	-9
JUL	-34	-39	-56	-11	+11	+23	+39	+153	+98	-50	-161	-167	-105	-18	+110	+120	+114	+73	-18	+18	-2	-41	-39	-12
AUG	-77	+4	-5	-39	+4	+13	+77	+229	+178	+5	-118	-141	-150	-76	+19	+102	+66	+3	+10	-1	-31	-72	+12	-18
SEP	-43	-72	-69	-49	-26	+6	+93	+239	+216	+47	-66	-134	-107	-35	-17	+35	-24	+14	+21	-7	+28	-49	+18	-19
OCT	-5	-76	-128	-42	-67	+27	+41	+168	+205	+39	-120	-138	-29	+16	+6	+83	+7	+14	+41	+37	-8	+45	-31	-92
NOV	+35	-83	-56	-76	-64	-55	-53	+61	+91	+96	+87	+4	-52	-21	-8	-41	-61	-10	+35	+72	+52	+49	+10	-11
DEC	-84	-77	-57	-73	-43	-92	-84	-78	-21	+61	+119	+168	+176	+51	-45	-101	-33	+58	+41	+46	+41	+17	-25	-14
MEANS	-46	-53	-56	-47	-33	-9	+12	+96	+107	+44	+1	-19	-41	-39	-7	+24	+37	+60	+25	+7	+9	+15	-30	-29

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1933

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

1933

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 13 NORTHWARD COMPONENT, ALL DAYS																								
JAN	- 61	- 82	- 71	- 46	- 31	- 46	- 17	+ 38	+ 161	+ 186	+ 115	- 152	- 214	- 158	- 97	- 20	+ 114	+ 114	+ 117	+ 84	+ 32	+ 41	+ 16	- 33
FEB	- 71	- 23	- 39	- 48	+ 5	+ 24	+ 51	+ 90	+ 36	- 1	- 74	- 123	- 154	- 71	+ 16	+ 58	+ 123	+ 66	+ 76	+ 104	+ 33	- 18	- 30	- 30
MAR	- 34	- 70	- 32	- 14	+ 55	+ 19	+ 126	+ 208	+ 166	- 46	- 220	- 260	- 231	- 130	- 20	+ 74	+ 126	+ 86	+ 122	+ 84	+ 21	+ 38	- 17	- 41
APR	- 11	- 29	+ 54	+ 12	+ 46	+ 89	+ 207	+ 264	+ 150	- 151	- 335	- 310	- 223	- 155	- 73	+ 43	+ 119	+ 189	+ 102	+ 30	+ 18	+ 50	- 60	- 13
MAY	- 42	+ 35	- 6	+ 37	+ 87	+ 116	+ 212	+ 276	+ 75	- 140	- 305	- 382	- 259	- 144	- 42	+ 54	+ 126	+ 173	+ 55	+ 46	+ 5	+ 62	- 14	- 45
JUN	- 85	- 62	+ 15	+ 30	+ 74	+ 156	+ 271	+ 278	+ 126	- 166	- 334	- 323	- 244	- 142	- 77	+ 66	+ 90	+ 116	+ 86	- 5	+ 24	+ 71	+ 54	- 22
JUL	- 80	+ 49	- 7	+ 62	+ 53	+ 117	+ 216	+ 230	+ 104	- 101	- 316	- 358	- 300	- 179	- 27	+ 72	+ 166	+ 168	+ 78	+ 7	+ 42	+ 12	+ 1	- 7
AUG	- 36	- 19	+ 70	+ 45	+ 52	+ 101	+ 243	+ 302	+ 151	- 224	- 385	- 384	- 285	- 172	+ 18	+ 124	+ 186	+ 102	+ 59	+ 6	+ 14	- 22	+ 7	+ 35
SEP	- 16	- 37	- 28	+ 11	+ 45	+ 87	+ 198	+ 237	+ 17	- 177	- 301	- 321	- 192	- 57	+ 70	+ 128	+ 105	+ 46	+ 53	+ 61	+ 43	+ 16	+ 10	+ 18
OCT	+ 10	- 106	- 30	- 23	- 3	+ 36	+ 138	+ 206	+ 188	+ 30	- 159	- 297	- 248	- 116	+ 17	+ 66	+ 78	+ 97	+ 73	+ 82	+ 57	+ 5	- 16	- 93
NOV	- 1	- 4	- 72	- 40	- 19	0	+ 18	+ 116	+ 73	0	- 96	- 178	- 155	- 7	+ 3	+ 62	+ 87	+ 99	+ 116	+ 42	+ 40	- 14	- 4	- 60
DEC	- 64	- 83	- 33	- 37	- 69	- 48	- 11	+ 50	+ 122	+ 132	+ 76	- 69	- 154	- 120	- 34	+ 64	+ 69	+ 94	+ 83	+ 60	+ 50	+ 9	- 26	- 54
MEANS	- 39	- 36	- 16	- 2	+ 22	+ 52	+ 134	+ 189	+ 115	- 50	- 188	- 261	- 221	- 120	- 20	+ 64	+ 115	+ 112	+ 85	+ 52	+ 32	+ 21	- 8	- 29
TABLE 14 EASTWARD COMPONENT, ALL DAYS																								
JAN	- 33	- 71	- 63	- 84	- 57	- 69	- 60	- 59	+ 35	+ 160	+ 302	+ 119	- 8	- 105	- 134	- 151	- 37	+ 46	+ 50	+ 61	+ 32	+ 55	+ 60	+ 20
FEB	- 63	- 40	- 47	- 55	- 65	- 12	0	+ 33	+ 3	+ 13	+ 37	+ 86	- 30	- 52	+ 31	+ 8	+ 68	+ 5	+ 8	+ 94	+ 20	+ 11	- 30	- 31
MAR	- 35	- 82	- 56	- 73	- 6	- 15	+ 14	+ 81	+ 116	+ 12	- 44	- 53	- 32	- 20	- 8	+ 37	+ 62	+ 54	+ 66	+ 71	- 26	+ 10	- 30	- 35
APR	- 24	- 46	- 19	- 49	+ 10	+ 13	+ 62	+ 164	+ 135	+ 9	- 70	- 48	- 43	- 60	- 49	+ 20	+ 57	+ 103	+ 51	- 26	- 26	- 36	- 91	- 43
MAY	- 70	- 2	- 37	- 21	+ 14	- 17	+ 89	+ 139	+ 127	- 32	- 79	- 75	- 119	- 52	- 11	+ 61	+ 88	+ 79	+ 18	+ 18	- 27	- 6	- 29	- 63
JUN	- 106	- 3	- 34	- 34	+ 7	- 10	+ 78	+ 146	+ 100	- 119	- 145	- 102	- 74	- 29	+ 66	+ 134	+ 110	+ 91	+ 64	- 38	+ 10	- 30	- 18	- 64
JUL	- 108	+ 13	- 64	+ 1	+ 19	- 6	+ 65	+ 141	+ 114	- 58	- 134	- 130	- 73	- 50	+ 40	+ 87	+ 135	+ 115	+ 24	- 20	- 26	- 14	- 17	- 64
AUG	+ 2	- 30	+ 38	+ 14	+ 25	+ 13	+ 67	+ 206	+ 164	- 24	- 130	- 154	- 117	- 100	+ 20	+ 48	+ 45	+ 14	0	- 11	- 5	- 53	+ 10	- 32
SEP	- 59	- 90	- 25	- 40	- 25	+ 8	+ 81	+ 206	+ 131	+ 18	- 97	- 159	- 93	- 55	+ 3	+ 5	- 3	+ 21	+ 27	+ 27	- 16	+ 68	+ 25	+ 33
OCT	- 11	- 108	- 45	- 41	- 36	+ 14	+ 54	+ 147	+ 190	+ 140	+ 50	- 78	- 124	- 137	- 78	- 26	+ 24	+ 23	- 7	+ 92	+ 29	+ 34	- 43	- 71
NOV	- 13	- 48	- 90	- 87	- 50	- 55	- 38	+ 64	+ 72	+ 72	+ 109	+ 35	- 27	+ 33	- 71	- 65	+ 10	+ 29	+ 37	+ 33	+ 34	+ 12	+ 2	- 2
DEC	- 36	- 29	- 47	- 51	- 60	- 75	- 37	+ 9	+ 18	+ 96	+ 181	+ 152	- 3	- 83	- 88	- 87	- 38	+ 23	+ 28	+ 70	+ 67	+ 35	- 3	- 29
MEANS	- 46	- 45	- 41	- 43	- 19	- 18	+ 31	+ 106	+ 100	+ 24	- 2	- 34	- 62	- 59	- 23	+ 6	+ 43	+ 50	+ 30	+ 31	+ 6	+ 7	- 14	- 32

1934

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER :

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

26

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
JAN	- 49	- 15	- 32	- 34	- 60	- 52	+ 26	+ 31	+122	+170	+124	- 66	-177	-190	-121	- 47	+ 81	+115	+104	+ 80	+ 1	+ 2	+ 9	- 31
FEB	- 65	- 33	- 42	- 50	- 26	- 49	+ 34	+101	+129	+ 84	+ 32	- 96	-180	-156	- 98	+ 25	+ 76	+ 97	+ 97	+101	+ 52	+ 8	+ 5	- 37
MAR	+ 3	- 87	- 33	+ 34	- 17	+ 23	+101	+175	+120	+ 70	- 83	-206	-260	-177	- 76	+ 2	+ 73	+105	+ 99	+ 72	+ 33	+ 28	- 9	+ 23
APR	- 41	- 20	+ 44	+ 45	+ 53	+ 70	+158	+266	+121	-102	-271	-281	-220	-149	- 59	+ 52	+ 87	+103	+ 58	+ 47	+ 34	- 10	+ 6	0
MAY	- 1	- 3	- 19	- 61	+ 50	+119	+222	+264	+140	-131	-345	-301	-198	-134	- 63	+ 14	+ 76	+ 99	+ 76	+ 36	+ 49	- 1	+ 21	- 5
JUN	- 41	+ 3	+ 52	+ 71	+ 97	+144	+229	+259	+177	-105	-394	-440	-302	-124	- 25	+100	+160	+133	+ 51	- 1	+ 3	- 25	- 16	+ 15
JUL	- 21	- 11	+ 40	+ 6	+104	+ 82	+251	+287	+149	- 45	-540	-405	-353	-236	- 39	+116	+126	+ 68	+ 71	- 15	+ 82	+ 90	- 5	+ 12
AUG	+ 15	+ 39	+ 16	+ 70	+ 67	+123	+270	+308	+141	-258	-397	-386	-313	-148	+ 4	+ 49	+ 89	+ 92	+ 17	+ 58	+ 59	+ 23	+ 35	+ 14
SEP	-100	- 22	+ 42	- 25	- 86	- 44	+116	+325	+188	- 27	-107	-149	-154	- 70	+ 8	+121	+ 30	- 20	- 30	+ 2	+ 68	- 25	- 63	- 24
OCT	- 36	- 40	- 32	- 40	-101	+ 98	+172	+211	+211	- 3	-175	-251	-200	-106	+ 13	+ 38	+ 33	+ 35	+ 95	+ 56	+ 13	+ 62	- 7	- 48
NOV	- 28	- 27	- 40	- 32	+ 32	+ 20	+ 85	+217	+169	+ 71	- 99	-236	-238	-136	- 26	+ 39	+ 40	+ 72	+ 60	+ 47	+ 53	+ 24	- 11	- 51
DEC	- 50	- 37	- 11	- 77	- 17	- 22	+ 37	+101	+186	+202	+ 63	-232	-280	-222	- 87	+ 40	+107	+120	+102	+ 52	+ 53	+ 16	- 2	- 28
MEANS	- 34	- 21	- 1	- 8	+ 8	+ 43	+142	+212	+154	- 6	-166	-254	-240	-154	- 47	+ 46	+ 82	+ 88	+ 67	+ 45	+ 42	+ 15	- 3	- 13
JAN	- 17	- 59	0	- 63	- 74	- 59	- 23	- 48	- 22	+ 88	+187	+208	+ 45	- 77	-112	- 90	+ 2	+ 74	+ 62	+ 37	- 18	0	+ 23	- 53
FEB	- 41	- 69	- 45	- 72	- 91	- 29	- 14	- 27	+ 64	+ 62	+132	+137	+ 41	+ 3	- 79	- 64	+ 8	+ 26	+ 26	+ 67	0	+ 43	- 48	- 34
MAR	- 21	- 76	- 95	- 30	- 26	- 59	+ 57	+103	+108	+ 91	+ 24	+ 4	- 7	- 18	- 85	- 45	+ 10	+ 65	+ 42	+ 22	+ 16	- 19	+ 1	- 64
APR	- 46	- 86	- 27	- 40	- 9	+ 14	+ 17	+188	+ 97	+ 45	- 54	- 42	- 89	- 99	- 61	- 16	+ 37	+ 57	+ 63	+ 47	+ 45	- 65	+ 46	- 13</

1936

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	O-1	I-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24									
												TABLE 19																					
									NORTHWARD COMPONENT, ALL DAYS																								
JAN	- 10	- 56	- 28	- 53	- 3	- 61	+ 15	+121	+195	+217	+ 95	-146	-264	-260	-183	- 31	+ 88	+ 63	+100	+102	+ 73	+ 26	+ 11	- 12									
FEB	- 19	- 12	0	- 22	- 14	+ 83	+ 68	+230	+112	- 77	-187	-288	-247	-117	+ 41	+111	+ 94	+ 32	+ 86	+ 74	+ 69	+ 48	- 5	- 49									
MAR	- 6	+ 37	+ 58	- 43	- 23	+ 32	+154	+353	+277	+ 14	-251	-359	-345	-275	-152	- 11	+ 81	+128	+124	+101	+ 56	+ 39	+ 58	- 38									
APR	+ 29	- 3	+ 2	+ 34	+ 51	+ 57	+245	+376	+194	-115	-371	-356	-248	-259	- 80	- 67	+140	+166	+158	+ 48	+ 48	- 9	- 63	+ 28									
MAY	+ 39	+ 14	+ 24	+ 81	+ 71	+186	+301	+318	+163	-109	-380	-401	-291	-198	- 81	+ 27	+ 65	+115	+ 66	+ 10	- 20	+ 6	+ 43	- 30									
JUN	+ 40	+ 33	+ 54	+ 59	+ 53	+154	+263	+250	+156	- 74	-359	-463	-368	-229	- 94	+ 17	+150	+144	+108	+ 22	+ 68	+ 48	- 51	+ 33									
JUL	- 10	+ 30	+ 39	+ 98	+ 81	+133	+271	+311	+190	- 76	-446	-540	-481	-279	- 81	+ 75	+199	+207	+150	+ 19	+ 17	+ 47	+ 43	+ 3									
AUG	- 12	+ 24	+ 29	+ 62	+ 87	+180	+352	+480	+194	-216	-492	-510	-371	-238	- 32	+ 96	+116	+144	+ 55	- 1	+ 46	+ 3	+ 11	+ 1									
SEP	+ 41	+ 66	+ 29	+ 46	+ 54	+100	+307	+341	+140	-210	-384	-453	-353	-162	+ 26	+ 96	+115	+ 52	+ 14	+ 43	+ 35	+ 25	+ 38	- 8									
OCT	+ 12	- 16	+ 36	+ 2	- 45	+ 14	+187	+312	+115	-133	-212	-306	-257	- 94	- 2	+ 56	+ 42	+ 42	+ 93	+ 78	+ 59	+ 34	+ 7	- 35									
NOV	- 40	- 50	+ 3	- 20	- 3	- 21	+115	+199	+231	+ 40	-110	-268	-283	-164	- 74	- 28	+ 50	+125	+121	+116	+ 76	+ 16	- 31	- 7									
DEC	- 58	- 41	- 22	- 24	- 4	- 33	- 31	+110	+238	+200	+106	-102	-207	-243	-172	- 69	+ 23	+ 96	+ 82	+ 75	+ 57	+ 33	+ 5	- 24									
MEANS	+ 0	+ 2	+ 19	+ 17	+ 25	+ 69	+187	+283	+184	- 45	-249	-349	-310	-210	- 74	+ 23	+ 97	+110	+ 96	+ 57	+ 49	+ 26	+ 6	- 12									
												TABLE 20																					
									EASTWARD COMPONENT, ALL DAYS																								
JAN	- 36	- 49	- 49	- 86	- 54	- 49	- 52	- 28	+ 34	+149	+322	+241	+ 45	-102	-204	-130	- 32	- 4	+ 20	+ 28	0	+ 15	+ 40	- 23									
FEB	- 48	- 68	- 32	- 59	- 78	+ 10	+ 38	+ 98	+ 96	+ 46	+ 20	- 53	- 75	- 24	+ 47	+ 49	+ 50	+ 17	+ 10	- 4	+ 35	+ 13	- 64	- 20									
MAR	- 92	- 39	- 32	- 62	- 64	- 26	+ 27	+189	+228	+113	- 36	- 16	- 19	- 73	-104	- 33	- 16	+ 73	+ 51	+ 28	- 5	- 37	+ 1	- 45									
APR	- 18	- 46	- 38	- 17	- 29	- 26	+ 64	+241	+168	+ 95	- 43	- 91	- 87	- 62	+ 6	- 87	+ 26	+ 75	+ 79	+ 11	- 35	- 85	-118	0									
MAY	- 30	- 41	- 39	+ 33	+ 21	+ 32	+ 88	+226	+154	+ 2	- 84	-109	-142	- 78	+ 12	+ 62	+ 18	+ 69	+ 2	- 8	- 64	- 35	- 13	- 81									
JUN	- 3	+ 13	+ 8	+ 11	- 35	- 33	+ 51	+118	+ 72	- 26	-134	-180	-100	- 34	+ 13	+111	+164	+ 51	+ 17	- 4	+ 28	- 21	-113	+ 31									
JUL	-102	- 72	- 88	+ 69	+ 47	- 9	+ 21	+181	+154	+ 15	-112	-141	-165	- 38	+ 74	+113	+150	+165	+ 5	- 14	- 75	- 19	- 23	-109									
AUG	- 88	- 26	- 31	- 18	- 12	+ 24	+ 62	+187	+101	- 68	-158	-163	- 58	+ 19	+ 32	+ 60	+ 83	+121	+ 78	- 19	- 28	+ 12	- 27	- 78									
SEP	- 18	- 27	- 40	- 13	+ 2	+ 31	+135	+315	+242	+ 45	-109	-193	-167	-106	- 43	- 41	- 3	+ 17	- 17	+ 24	- 1	+ 16	+ 5	- 49									
OCT	- 63	- 78	- 98	- 51	- 69	+ 12	+ 63	+166	+115	+ 65	+ 26	- 20	- 78	- 34	+ 15	+ 30	- 12	+ 28	+ 26	+ 56	+ 13	- 2	- 76	- 37									
NOV	- 73	- 41	- 70	- 37	- 69	- 27	- 13	+ 86	+148	+161	+132	+ 50	- 38	- 79	- 85	-111	-115	+ 18	+ 60	+ 61	+ 53	0	- 19	+ 6									
DEC	- 78	- 65	- 58	- 54	- 53	- 42	- 63	+ 49	+153	+201	+252	+220	+ 98	- 95	-180	-182	-137	- 55	- 11	+ 28	+ 42	+ 23	+ 16	- 12									
MEANS	- 54	- 45	- 47	- 24	- 33	- 9	+ 35	+152	+137	+ 66	+ 6	- 38	- 66	- 59	- 35	- 13	+ 15	+ 48	+ 27	+ 15	- 3	- 10	- 33	- 35									

1937

MONTH	O-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
JAN	- 37	- 50	- 41	- 32	- 17	- 52	+ 12	+150	+368	+399	+166	-253	-424	-351	-244	- 65	+ 94	+126	+ 91	+ 92	+ 72	+ 30	- 9	- 29
FEB	- 5	+ 5	+ 26	- 56	- 4	+ 18	+ 68	+182	+195	+ 63	-104	-243	-297	-177	- 79	+ 18	+ 56	+ 66	+ 72	+ 50	+ 70	+ 28	+ 56	- 29
MAR	+ 55	- 1	+ 6	+ 63	+ 6	+ 5	+157	+379	+194	- 69	-301	-333	-300	-242	-137	+ 35	+ 64	+128	+ 86	+ 55	+ 54	+ 43	+ 26	+ 35
APR	+ 23	+ 32	+ 34	+ 39	+ 75	+100	+212	+372	+217	-120	-373	-432	-347	-233	-121	+ 31	+ 67	+195	+190	+ 68	+ 3	- 13	- 55	+ 24
MAY	+ 37	- 4	- 5	+ 54	+ 97	+140	+292	+374	+160	-134	-433	-456	-359	-241	-105	+ 47	+154	+203	+169	- 2	+ 68	- 44	+ 23	- 25
JUN	- 54	+ 38	- 1	+ 54	+ 91	+194	+293	+309	+116	-155	-417	-442	-324	-173	- 9	+110	+140	+155	+ 80	- 23	- 26	+ 26	- 11	+ 33
JUL	- 52	- 4	+ 17	+ 99	+ 60	+193	+325	+328	+225	-139	-461	-521	-434	-222	- 82	+ 71	+141	+216	+122	- 14	+ 12	+ 76	+ 59	- 28
AUG	+ 43	+ 20	- 35	+ 25	+ 66	+162	+396	+472	+251	-194	-510	-554	-521	-369	-129	+ 69	+174	+200	+120	+ 3	+ 40	+117	+127	+ 14
SEP	- 10	+ 15	+ 22	- 18	+ 47	+124	+403	+486	+199	-107	-397	-469	-449	-252	- 45	+125	+104	+ 60	+ 6	+ 62	+ 34	- 19	+ 35	+ 41
OCT	+ 24	- 26	- 65	- 11	- 81	- 30	+204	+288	+200	- 8	-171	-298	-261	-147	- 30	+ 32	0	+ 29	+ 80	+ 74	+ 62	+ 56	+ 24	+ 41
NOV	- 14	- 4	+ 25	- 12	- 27	- 25	+ 74	+154	+101	+ 32	-102	-232	-218	-118	- 27	+ 59	+ 47	+ 85	+ 55	+ 72	+ 38	+ 24	- 19	+ 29
DEC	- 92	- 28	- 37	- 42	- 41	0	+ 9	+165	+281	+213	+ 67	-290	-307	-185	- 74	+ 6	+ 91	+ 90	+ 87	+ 60	+ 53	+ 12	0	- 30
MEANS	- 7	- 1	- 4	+ 14	+ 24	+ 69	+204	+305	+209	- 17	-253	-377	-353	-226	- 90	+ 44	+ 94	+129	+ 96	+ 41	+ 40	+ 28	+ 22	+ 7
JAN	- 13	- 34	- 65	- 70	- 44	- 71	- 46	+ 34	+210	+424	+513	+246	-116	-294	-340	-245	-110	- 22	+ 12	+ 32	+ 21	+ 14	- 12	- 24
FEB	- 20	- 61	- 12	- 80	- 91	- 46	+ 23	+ 47	+102	+119	+167	+ 63	- 8	- 61	-160	-100	- 74	+ 37	+ 81	+ 25	+ 19	- 2	+ 68	- 46
MAR	- 26	- 97	- 31	+ 2	+ 26	- 3	+ 87	+229	+126	- 19	-137	- 68	- 18	- 65	- 40	- 13	- 29	+ 98	+ 29	+ 3	- 26	- 30	+ 5	- 17
APR	- 94	+ 28	- 25	- 99	- 18	+ 60	+ 99	+241	+226	+ 36	+ 6	- 70	- 38	-100	-127	-158	-101	+ 53	+ 95	+ 81	- 10	- 19	- 87	+ 33
MAY	- 6	- 33	- 34	- 35	+ 14	- 42	+ 67	+259	+205	+ 70	-102	-171	-172	-115	- 24	+ 35	+106	+126						

1938

30

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1939

MONTHLY MEAN VALUES, EXPRESSED IN HUNDRETHS OF MILLIVOLTS PER KILOMETER

1939

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
												TABLE 25												
												NORTHWARD COMPONENT, ALL DAYS												
JAN	- 61	- 84	- 45	- 15	- 21	+ 26	+ 25	+170	+326	+254	+ 36	-297	-382	-317	-153	+ 43	+152	+105	+ 88	+ 92	+ 55	+ 53	- 7	- 55
FEB	+ 43	-106	- 98	- 89	- 61	- 38	- 68	+ 34	+156	+108	+ 18	- 73	-315	-149	- 39	+ 62	+ 82	+101	+ 48	+ 94	+136	+ 92	+ 85	- 17
MAR	+ 16	- 34	+ 24	+ 36	- 45	+ 6	+ 79	+251	+182	- 86	-204	-239	-233	-232	-154	+ 56	+111	+103	+ 77	+192	+121	+ 7	+ 4	+ 10
APR	- 43	- 10	+ 66	- 22	+ 32	+ 51	+234	+359	+261	- 26	-280	-404	-302	-326	-230	- 95	+146	+180	+107	+ 60	+ 44	+ 63	+ 16	+114
MAY	- 35	- 10	- 37	+ 20	+ 76	+196	+312	+240	+169	-164	-376	-364	-295	-211	-137	- 24	- 6	+144	+ 90	+166	+ 11	+ 87	+ 44	- 10
JUN	- 36	- 5	+ 13	+ 49	+107	+202	+320	+340	+112	-131	-397	-523	-366	-287	-107	+ 59	+186	+168	+136	+ 76	+ 62	+ 58	- 27	- 21
JUL	+ 1	- 20	- 90	+ 48	+ 93	+257	+316	+384	+262	-151	-409	-459	-357	-288	-132	+ 16	+137	+142	+ 55	+ 54	+ 19	+ 16	+ 82	+ 25
AUG	+ 33	+ 1	+134	+ 30	+ 62	+188	+418	+398	+151	-305	-487	-548	-416	-242	- 38	+145	+168	+145	+ 52	+111	+ 49	+ 34	+ 15	- 26
SEP	+ 20	+ 55	+ 87	+ 88	+105	+132	+317	+412	+171	-195	-394	-440	-389	-248	- 63	+ 63	+117	+ 3	- 25	+ 58	+ 67	+ 42	+ 12	+ 6
OCT	+ 37	- 13	+ 23	- 93	+ 10	+ 21	+182	+240	+178	- 81	-263	-359	-247	- 40	+ 22	+112	+ 44	+ 61	+ 89	+ 95	+ 52	- 26	- 57	+ 12
NOV	- 48	- 78	- 89	+ 15	- 22	+ 33	+ 69	+219	+188	+ 35	-155	-264	-206	- 89	- 39	0	+152	+ 92	+123	+ 70	+104	+ 5	+ 27	- 51
DEC	- 91	-108	- 33	- 10	- 22	+ 14	- 24	+ 62	+ 76	+ 66	+ 16	-124	-180	- 57	- 43	- 23	+ 28	+148	+108	+160	+ 67	+ 38	- 30	- 55
MEANS	- 14	- 34	- 4	+ 5	+ 26	+ 91	+182	+259	+186	- 56	-241	-342	-307	-207	- 93	+ 34	+110	+116	+ 79	+102	+ 66	+ 31	+ 13	- 6
												TABLE 26												
												EASTWARD COMPONENT, ALL DAYS												
JAN	- 70	- 85	- 97	- 42	- 65	- 33	- 31	+ 26	+190	+359	+342	+113	-172	-276	-287	-189	- 1	+106	+ 19	+ 24	+ 31	+123	+ 17	+ 6
FEB	- 70	- 89	- 95	-153	- 84	- 62	- 37	- 83	+ 1	+ 86	+104	+ 54	- 5	+ 36	+ 81	+ 57	+ 13	+ 82	+ 76	+ 77	+ 15	+ 10	+ 4	- 27
MAR	-121	-183	-115	+ 11	- 33	+ 9	+ 60	+129	+134	- 24	- 82	+ 61	+121	+ 20	+ 5	+ 35	+ 22	+ 36	+ 30	+ 61	- 23	- 65	- 70	- 13
APR	-162	- 54	- 18	- 69	- 72	- 14	+ 52	+281	+330	+111	+127	- 8	-110	-217	-141	-105	+ 39	- 11	- 21	- 21	+ 11	+ 77	- 36	+ 35
MAY	- 22	-110	- 48	- 50	- 30	- 20	+ 99	+152	+168	- 18	- 94	- 89	-117	- 45	- 25	- 2	+125	+ 55	+ 76	+112	+ 1	+ 9	- 5	-117
JUN	-134	- 42	+ 50	+ 25	+ 5	- 6	+ 88	+163	+100	- 84	-150	-201	-111	- 94	+ 38	+ 74	+138	+ 91	+ 88	+ 29	- 58	+ 44	- 5	- 50
JUL	+ 21	- 48	- 90	- 18	- 18	+ 52	+ 46	+223	+162	+ 21	- 82	-144	-112	- 47	+ 9	+ 37	+ 92	+ 23	+ 5	- 45	- 53	- 74	- 37	+ 52
AUG	- 16	- 59	- 42	- 22	- 3	+ 64	+201	+211	+224	- 24	-111	-139	-177	-117	- 10	+ 24	+ 82	+ 71	+ 20	+ 31	- 58	- 42	- 99	-117
SEP	- 58	- 36	- 63	- 27	- 8	+ 18	+143	+377	+333	+115	- 52	-124	-178	-129	-103	- 97	- 10	- 55	- 51	+ 17	+ 14	- 1	- 43	+ 19
OCT	+ 26	-109	- 88	-152	- 82	- 42	+ 64	+ 81	+192	+ 74	- 30	- 41	- 47	+ 31	+ 8	+ 65	+ 2	- 17	+ 57	+ 68	+ 33	- 1	-128	+ 30
NOV	- 39	- 66	- 93	- 26	- 67	+ 28	+ 47	+105	+160	+143	+ 98	- 2	- 52	- 19	- 56	- 50	- 68	- 12	+ 4	- 11	+ 55	+ 31	- 10	- 24
DEC	- 76	-131	- 50	- 71	- 36	+ 12	- 14	- 28	+ 35	+ 98	+196	+130	+ 29	+ 25	- 88	-102	-109	- 15	+ 23	+120	+ 35	+ 33	- 10	- 11
MEANS	- 60	- 84	- 62	- 45	- 41	- 8	+ 60	+145	+769	+ 71	+ 22	- 31	- 79	- 69	- 47	- 21	+ 27	+ 30	+ 27	+ 38	0	+ 12	- 35	- 18

1940

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	O-1	I-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
										TABLE 27 NORTHWARD COMPONENT, ALL DAYS																						
JAN	- 24	- 76	- 30	- 51	- 38	- 11	- 51	+140	+226	+181	+ 6	-212	-198	-142	- 74	+ 16	+106	+ 90	+ 90	+106	+ 73	- 36	- 19	- 62								
FEB	- 56	- 39	- 29	- 6	- 28	- 44	- 29	+ 39	+ 67	+ 33	- 17	-114	-171	-122	- 25	+ 38	+ 86	+ 60	+113	+ 73	+ 75	+ 51	+ 57	- 7								
MAR	- 22	+ 1	- 29	- 23	- 11	+ 22	+117	+210	+188	- 27	-192	-266	-264	-174	- 77	+ 33	+115	+127	+107	+ 70	+ 75	+ 26	- 17	+ 8								
APR	+ 7	+ 4	- 32	+ 92	+ 45	+131	+266	+307	+205	-131	-364	-345	-285	-259	-161	- 30	+ 99	+162	+ 82	+ 91	+ 82	+ 70	+ 13	- 17								
MAY	+ 9	- 34	+ 40	+ 82	+ 81	+194	+217	+236	+ 60	-188	-385	-369	-288	-188	- 72	+ 35	+127	+152	+ 91	+ 35	+ 68	+ 52	+ 68	- 32								
JUN	- 11	- 99	- 1	+ 74	+ 76	+185	+353	+346	+108	-139	-451	-527	-393	-237	-108	+126	+221	+245	+157	+ 57	+ 52	+ 15	+ 16	- 75								
JUL	+ 14	- 56	- 33	+138	+ 71	+186	+245	+232	+178	-123	-369	-432	-380	-270	-109	+ 74	+160	+228	+146	+ 50	+ 47	+ 23	+ 5	- 13								
AUG	- 6	- 45	- 44	+ 28	+ 66	+ 91	+330	+414	+206	-177	-426	-465	-412	-271	- 51	+121	+177	+144	+104	+ 61	+ 49	+ 23	- 3	- 64								
SEP	- 20	- 5	+ 20	- 38	+ 18	+127	+252	+382	+ 76	-188	-228	-307	-336	- 97	+ 30	+146	+150	+ 97	+ 27	+ 54	- 4	- 17	- 43	+ 88								
OCT	+ 1	- 3	- 92	- 15	- 89	- 26	+146	+171	+148	- 97	-112	-172	-122	- 72	+ 74	+ 81	+ 22	+ 12	+ 63	+ 80	+ 57	- 27	+ 10	- 27								
NOV	-211	-109	-103	-106	- 92	- 73	-118	- 38	+184	+157	+128	- 17	-107	- 28	+ 19	- 37	+ 31	+113	+ 85	+130	+109	+136	+ 39	- 81								
DEC	-125	- 16	- 95	- 81	- 65	-110	- 40	+ 20	+106	+170	+ 93	- 15	-121	-100	- 51	- 37	+ 59	+131	+152	+ 91	+ 80	+ 46	- 18	- 51								
MEANS	- 37	- 40	- 36	+ 8	+ 3	+ 56	+141	+205	+146	- 48	-193	-270	-256	-163	- 50	+ 47	+113	+130	+101	+ 75	+ 64	+ 30	+ 9	- 28								
										TABLE 28 EASTWARD COMPONENT, ALL DAYS																						
JAN	- 18	- 90	- 82	- 84	- 86	- 50	- 66	+ 44	+119	+230	+215	+149	- 8	- 66	-144	-110	- 12	+ 28	+ 11	+ 57	+ 10	- 35	+ 24	- 34								
FEB	- 96	- 76	- 58	- 84	- 51	- 9	+ 15	- 36	+ 15	+ 38	+ 89	+ 95	+ 85	+ 54	- 37	- 46	- 13	+ 39	+ 42	+ 22	+ 32	+ 22	- 14	- 25								
MAR	- 74	- 38	-110	- 75	- 87	- 9	+ 16	+ 79	+ 97	- 8	- 81	+ 5	+ 60	+ 2	- 16	- 14	+ 94	+ 87	+ 74	- 20	+ 33	+ 17	- 52	- 29								
APR	- 41	-103	-149	- 4	- 21	- 61	+ 71	+206	+179	+ 28	- 60	- 21	- 16	- 78	- 72	- 47	+ 3	+ 55	+ 59	+ 6	+ 43	+ 42	- 8	- 67								
MAY	- 51	- 71	- 19	+ 43	+ 8	+ 39	+ 81	+158	+ 95	- 48	-111	-121	- 78	- 30	- 4	+ 49	+ 78	+105	+ 27	- 44	- 4	+ 5	- 1	-102								
JUN	- 66	- 68	- 14	+ 6	- 33	- 37	+ 75	+237	+194	- 46	-210	-241	-203	- 91	- 28	+127	+158	+ 77	+ 75	- 18	+ 51	+ 33	+ 80	- 59								
JUL	- 52	- 87	- 74	+ 91	+ 9	+ 2	+ 84	+156	+142	+ 11	- 92	-135	-112	- 98	+ 23	+117	+ 84	+147	+ 51	- 22	- 35	-119	- 16	- 78								
AUG	- 22	- 55	- 49	+ 1	+ 34	- 19	+157	+360	+321	+107	- 92	-230	-219	-192	- 65	+ 52	+ 55	+ 27	+ 32	- 13	- 82	- 42	- 49	- 12								
SEP	- 68	- 81	- 37	- 67	- 13	+ 44	+168	+335	+255	+141	+109	-113	-212	-142	- 71	- 46	- 36	+ 12	+ 20	- 19	- 65	- 1	- 60	- 50								
OCT	- 81	- 36	- 85	- 74	- 83	- 23	+128	+132	+157	+ 70	+ 27	- 33	- 36	- 64	+ 5	+ 28	+ 7	+ 8	- 3	- 3	+ 23	- 21	+ 2	- 46								
NOV	-140	-117	- 56	- 23	- 63	+ 46	- 10	+ 37	+160	+ 91	- 12	- 62	- 73	- 56	+ 14	- 22	- 7	+ 10	+ 85	+ 97	+ 37	+ 67	+ 19	- 24								
DEC	-119	- 4	- 64	- 71	- 49	- 51	- 64	+ 11	+ 67	+123	+215	+214	+ 73	+ 26	- 30	-172	-145	- 37	- 13	+ 35	+ 26	+ 35	+ 15	- 19								
MEANS	- 69	- 69	- 66	- 28	- 36	- 11	+ 55	+143	+150	+ 61	0	- 41	- 62	- 61	- 33	- 7	+ 22	+ 46	+ 38	+ 6	+ 6	0	- 5	- 45								

1941

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
												TABLE 29	NORTHWARD COMPONENT, ALL DAYS											
JAN	- 58	- 60	- 24	- 94	- 45	- 67	- 72	+ 40	+195	+240	+ 32	-182	-231	-152	- 84	+ 17	+170	+113	+ 97	+ 87	+ 88	+ 37	- 37	- 23
FEB	- 61	- 28	- 87	- 73	- 13	- 39	- 54	+ 92	+123	+ 88	- 86	-204	-220	- 96	- 17	+118	+100	+128	+142	+150	+109	- 6	+ 19	- 75
MAR	-131	+ 49	- 59	+ 30	+ 4	+ 57	+134	+258	+125	- 51	-255	-304	-268	-168	+ 5	+116	+123	+152	+161	+ 56	- 23	- 3	+ 12	- 72
APR	- 85	+ 33	- 37	+ 73	+ 33	+ 44	+209	+235	+151	-126	-230	-280	-181	-114	- 80	+ 59	+ 60	+146	+104	+ 48	+ 20	+ 24	- 76	+ 20
MAY	+ 24	- 45	- 44	- 4	+ 59	+108	+187	+190	+ 57	-116	-296	-341	-217	-118	- 7	+ 59	+ 89	+104	+127	+ 32	+ 48	+ 89	+ 13	+ 4
JUN	+ 73	- 30	+ 17	+ 80	+ 89	+152	+200	+207	+107	-110	-317	-424	-300	-210	- 73	+ 74	+129	+144	+ 59	+ 31	- 4	+ 9	+ 35	+ 36
JUL	- 11	+ 8	- 4	+ 40	+ 54	+124	+261	+283	+190	-153	-423	-462	-394	-252	- 86	+123	+216	+220	+ 88	+ 66	+ 2	- 10	+ 44	+ 61
AUG	- 30	+ 44	+ 2	+ 31	+ 22	+171	+286	+240	+111	-225	-406	-395	-313	-169	+ 11	+126	+197	+190	+ 39	+ 12	+ 19	+ 21	+ 42	- 13
SEP	+ 53	+ 50	+ 27	- 22	+ 11	+ 96	+279	+279	+114	-199	-340	-354	-283	-104	+ 23	+162	+130	+ 68	+ 52	+ 10	+ 64	- 48	- 44	- 32
OCT	- 13	- 13	- 17	- 54	- 29	+ 39	+142	+235	+166	- 70	-202	-306	-215	- 89	+ 24	+ 70	+107	+ 35	+107	+ 58	+ 91	+ 41	- 48	- 39
NOV	- 36	- 92	- 54	- 77	- 36	+ 4	+ 32	+190	+ 92	- 33	-100	-227	-187	- 71	+ 18	+ 44	+ 63	+160	+111	+101	+ 72	+ 20	+ 12	- 36
DEC	-109	- 44	- 84	- 27	+ 3	- 38	- 25	+ 67	+ 89	+128	- 13	-155	-172	- 79	- 11	+ 29	+ 80	+128	+132	+107	+ 91	+ 22	- 49	- 78
MEANS	- 32	- 11	- 30	- 8	+ 13	+ 54	+132	+193	+131	- 52	+225	-303	-248	-135	- 23	+ 83	+122	+132	+102	+ 63	+ 48	+ 16	- 6	- 21
												TABLE 30	EASTWARD COMPONENT, ALL DAYS											
JAN	- 55	- 78	- 16	- 48	- 25	- 11	+ 11	- 31	+128	+314	+253	+ 89	-105	-211	-156	-121	+ 49	- 1	+ 14	+ 2	+ 20	+ 1	- 35	+ 7
FEB	- 83	- 43	- 99	+ 8	+ 21	+ 43	+ 35	+ 66	+ 41	+ 87	+ 84	+ 95	- 5	- 8	- 25	- 39	- 47	+ 2	+ 39	+ 49	- 25	- 51	- 34	-119
MAR	-137	- 19	-101	- 15	+ 31	+152	+ 81	+209	+179	+154	+ 48	- 46	-100	- 55	- 22	- 23	- 60	+ 59	+ 33	- 31	- 96	- 31	- 66	-149
APR	-108	- 51	- 44	- 38	- 3	+ 40	+123	+160	+180	- 37	- 26	- 2	- 38	- 15	- 2	+ 40	- 40	0	0	- 1	- 55	- 65	- 56	- 31
MAY	- 24	-101	-101	- 54	- 4	- 3	+ 60	+117	+ 56															

1936

1932

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
JAN	- 50	- 29	- 22	- 51	- 36	- 7	- 13	+ 68	+182	+259	+126	-137	-265	-227	-143	0	+ 53	+112	+ 66	+ 72	+ 54	+ 29	+ 8	- 45
FEB	- 33	- 62	- 54	- 16	- 26	+ 13	+ 5	+ 74	+137	+136	+ 33	-111	-174	-161	-101	- 27	+ 31	+ 67	+ 48	+ 52	+ 90	+ 11	+ 22	+ 38
MAR	- 26	+ 5	- 10	- 28	+ 1	+ 17	+ 38	+136	+165	+ 20	-142	-237	-231	-174	- 10	+ 55	+103	+106	+109	+ 57	+ 22	- 15	+ 28	+ 5
APR	- 7	+ 13	- 17	- 30	- 12	+118	+198	+214	+ 40	-145	-298	-226	-175	- 88	- 17	+ 69	+142	+129	+146	+ 9	+ 82	- 58	- 69	- 22
MAY	- 38	- 3	+ 32	+ 25	+ 66	+ 86	+180	+194	+103	-118	-285	-288	-223	-135	- 57	+ 75	+ 78	+142	+ 49	+ 51	+126	0	- 44	- 51
JUN	+ 12	+ 12	+ 42	+ 50	+ 78	+114	+221	+134	+ 67	+188	-361	-387	-256	-125	- 17	+ 86	+167	+145	+ 82	+ 36	- 31	- 10	+ 13	+ 18
JUL	- 11	+ 15	+ 5	+ 79	+ 80	+103	+239	+284	+165	-139	-381	-396	-285	-142	+ 36	+ 72	+100	+ 83	+ 28	- 23	- 2	+ 12	+ 88	+ 26
AUG	- 16	+ 9	+ 20	+ 41	+ 58	+110	+230	+284	+115	-186	-366	-374	-288	-192	- 15	+ 89	+114	+ 77	+ 36	+ 55	+ 54	+101	+ 61	- 21
SEP	+ 9	- 23	+ 47	+ 37	+ 50	+111	+229	+245	+109	-196	-348	-334	-261	-121	+ 19	+136	+ 95	+ 45	+ 83	- 15	+ 21	+ 34	+ 23	+ 15
OCT	- 40	- 58	- 28	+ 27	+ 19	+ 15	+ 94	+201	+194	-123	-281	-242	-149	- 2	+ 55	+ 87	+ 65	+ 45	+ 57	+ 57	+ 29	+ 12	+ 15	- 42
NOV	- 16	- 37	- 23	- 21	- 22	- 34	+ 27	+139	+158	+123	- 24	-156	-197	-103	- 36	+ 8	+ 45	+ 65	+ 59	+ 49	+ 26	+ 5	- 29	- 16
DEC	- 80	- 50	0	- 28	+ 9	- 27	- 7	+ 12	+ 83	+ 93	+ 71	- 45	- 88	-114	- 46	- 31	+ 55	+110	+ 77	+ 63	+ 4	+ 9	- 19	- 53
MEANS	- 25	- 17	- 1	+ 7	+ 22	+ 52	+120	+165	+126	- 39	-188	-244	-216	-132	- 28	+ 52	+ 87	+ 94	+ 71	+ 39	+ 40	+ 10	+ 8	- 12
JAN	- 19	- 23	- 45	- 74	- 79	- 45	- 58	- 15	+ 81	+226	+249	+113	- 7	-114	-167	-122	-101	+ 25	+ 12	+ 61	+ 59	+ 48	- 12	0
FEB	- 15	- 59	- 76	- 38	- 58	- 34	- 51	- 52	+ 3	+ 56	+ 79	+ 96	+ 75	+ 10	- 27	- 56	- 63	- 4	- 22	+ 62	+100	+ 22	+ 9	+ 45
MAR	- 38	- 2	- 39	- 46	- 40	- 38	- 40	- 28	+ 5	- 21	- 10	+ 15	- 1	- 71	+ 23	+ 38	+ 27	+113	+186	+ 70	- 38	- 38	- 22	0
APR	- 54	- 10	-101	- 46	- 47	+ 31	+ 45	+132	+ 59	+ 7	- 57	- 45	- 87	+ 31	+ 24	+ 3	+124	+104	+114	- 57	+ 14	+ 6	-131	- 59
MAY	- 66	- 80	- 40	- 15	+ 7	- 33	+ 51	+ 97	+ 88	+ 12	- 67	- 4	- 47	+ 33	+ 22	+ 77	+ 60	+ 94	- 45	+ 67	+ 28	- 24	-129	- 91
JUN	- 36	- 14	+ 4	+ 1	+ 4	+ 8	+ 47																	

1933

MONTH	O-1	I-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
												TABLE 35	NORTHWARD COMPONENT, 10 DAYS											
JAN	- 28	- 30	- 35	- 33	- 34	- 46	+ 26	+ 42	+147	+208	+136	- 94	-169	-127	-116	- 56	+ 61	+107	+ 76	+ 55	+ 26	+ 23	- 3	- 69
FEB	- 32	- 59	- 26	- 21	- 13	+ 43	+ 66	+171	+165	+ 90	- 47	-167	-199	-145	- 68	+ 8	+ 59	+ 52	+ 47	+ 63	+ 38	+ 13	+ 7	- 11
MAR	- 29	+ 4	- 3	0	+ 12	+ 18	+ 96	+191	+142	- 15	-199	-247	-240	-148	- 29	+ 69	+135	+ 88	+ 63	+ 59	+ 41	+ 6	+ 15	- 20
APR	- 26	+ 18	+ 24	+ 8	+ 79	+ 68	+165	+342	+220	-122	-286	-364	-263	-215	- 97	+ 34	+137	+181	+ 95	+ 57	+ 36	+ 30	+ 18	- 7
MAY	- 9	+ 32	+ 31	+ 35	+109	+129	+244	+294	+152	-158	-219	-380	-282	-171	- 58	+ 49	+ 83	+ 95	+ 69	+ 10	+ 18	+ 29	+ 18	- 13
JUN	- 16	- 53	+ 10	+ 40	+ 27	+181	+283	+276	+116	-153	-334	-351	-280	-153	- 27	+ 44	+ 94	+124	+ 68	+ 21	+ 22	+ 49	+ 8	+ 12
JUL	- 15	+ 47	- 37	+ 49	+ 69	+ 89	+228	+243	+ 91	- 60	-271	-365	-325	-232	- 62	+ 26	+153	+162	+ 79	+ 48	+ 28	+ 33	+ 14	+ 8
AUG	+ 18	+ 26	+ 4	+ 70	+ 67	+ 99	+236	+319	+194	-197	-415	-429	-369	-218	- 9	+124	+181	+110	+ 40	+ 14	+ 4	+ 5	+ 43	+ 32
SEP	- 52	- 12	+ 54	+ 49	+ 39	+103	+213	+249	+164	-128	-201	-378	-265	-117	+ 25	+108	+ 87	+ 38	+ 39	+ 61	+ 36	+ 20	+ 17	+ 42
OCT	- 12	- 76	+ 16	- 1	+ 21	+ 30	+145	+293	+243	+ 15	-194	-323	-299	-161	- 14	+ 21	+ 65	+ 42	+ 54	+ 39	+ 40	+ 10	- 13	- 40
NOV	- 52	- 2	- 11	- 24	- 27	+ 30	+ 49	+130	+107	+ 16	- 57	-153	-172	- 73	- 23	+ 8	+ 24	+ 83	+ 58	+ 48	+ 25	+ 48	- 15	- 21
DEC	- 35	- 34	- 15	- 47	- 22	- 18	- 16	+ 28	+ 99	+170	+112	- 73	-144	-129	- 75	+ 3	+ 67	+ 90	+ 62	+ 47	+ 19	- 8	- 29	- 46
MEANS	- 28	- 12	+ 1	+ 10	+ 27	+ 60	+140	+215	+153	- 28	-190	-277	-251	-157	- 46	+ 36	+ 96	+ 98	+ 62	+ 44	+ 28	+ 22	+ 1	- 7
												TABLE 36	EASTWARD COMPONENT, 10 DAYS											
JAN	- 56	- 29	- 45	- 56	- 58	- 78	- 66	- 30	+ 6	+146	+262	+153	- 7	- 64	-137	-151	- 63	+ 31	+ 47	+ 48	+ 46	+ 62	+ 54	- 21
FEB	- 31	- 40	- 25	- 15	- 49	- 16	- 2	+ 27	+ 68	+ 85	+ 94	+ 26	- 50	-103	- 88	- 36	+ 9	+ 4	+ 19	+ 24	+ 51	+ 32	+ 22	- 16
MAR	- 42	- 29	- 25	- 51	- 40	- 28	+ 31	+ 89	+ 82	+ 19	- 69	- 69	- 30	- 11	- 23	+ 23	+ 63	+ 50	+ 51	+ 53	+ 11	- 9	- 8	- 27
APR	- 59	- 9	+ 2	- 46	+ 18	- 2	+ 6	+204	+179	+ 35	- 79	- 69	- 79	-137	- 65	- 23	+ 62	+113	+ 25	+ 11	- 7	0	- 29	- 58
MAY	- 47	- 10	- 9	- 8	+ 26	+ 18	+ 75	+193	+155	- 74	- 84	- 99	-120	- 90	- 14	+ 35	+ 52	+ 38	+ 26					

1934

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
												TABLE 37												
												NORTHWARD COMPONENT, 10 DAYS												
JAN	- 66	- 67 - 26	- 38	- 37	- 25	- 7	+ 60	+257	+356	+191	-174	-309	-278	-164	- 50	+ 97	+105	+ 79	+ 51	+ 45	+ 3	- 34	- 52	
FEB	- 62	- 31 - 26	- 23	- 21	- 9	+ 22	+ 66	+104	+ 79	+ 59	-105	-187	-127	- 44	- 20	+112	+105	+ 76	+ 61	+ 37	0	- 29	- 29	
MAR	- 14	- 42 - 37	+ 17	+ 28	+ 49	+ 96	+165	+141	+ 11	-126	-232	-239	-177	- 82	+ 34	+ 58	+ 83	+ 70	+ 64	+ 64	+ 74	+ 36	- 51	
APR	+ 9	+ 19 + 21	+ 44	+ 64	+ 84	+208	+297	+148	-114	-318	-342	-254	-190	- 73	+ 38	+116	+119	+ 38	+ 21	+ 29	+ 8	+ 6	+ 17	
MAY	- 3	+ 23 + 30	+ 44	+ 82	+128	+257	+302	+175	-198	-395	-456	-325	-160	+ 20	+135	+152	+152	+ 62	- 4	+ 13	- 1	- 17	- 23	
JUN	+ 34	+ 34 + 8	+ 56	+ 67	+106	+186	+219	+123	- 66	-266	-352	-304	-185	-102	+ 71	+ 98	+102	+ 48	+ 14	0	+ 20	+ 19	+ 33	
JUL	- 37	- 13 + 5	+ 54	+ 58	+120	+241	+298	+127	-149	-393	-450	-370	-204	- 61	+ 63	+181	+183	+143	+ 58	+ 1	+ 18	+ 17	+ 35	
AUG	+ 15	- 25 - 25	+ 68	+ 94	+118	+257	+386	+245	-209	-447	-428	-295	-136	+ 13	+115	+ 88	+ 84	+ 30	+ 22	+ 17	+ 53	+ 33	- 43	
SEP	- 46	- 26 + 17	+ 4	+ 48	+111	+279	+287	+ 80	-186	-346	-400	-275	- 78	+ 32	+126	+111	+ 35	+ 22	+ 55	+ 50	+ 43	+ 18	- 81	
OCT	- 32	- 36 + 23	- 23	+ 22	+ 44	+129	+249	+217	+ 19	-218	-327	-247	- 81	+ 28	+ 53	+ 44	+ 23	+ 76	+ 67	+ 18	+ 13	- 28	- 22	
NOV	- 49	- 4 - 10	+ 17	+ 20	+ 27	+ 70	+164	+140	+ 48	- 69	-183	-185	-120	- 62	- 2	+ 24	+ 36	+ 70	+ 44	+ 36	+ 11	- 2	- 23	
DEC	- 48	- 85 - 46	- 41	- 73	- 11	- 5	+ 92	+126	+139	+ 56	-120	-170	-123	- 29	+ 25	+ 96	+104	+ 75	+ 62	+ 30	+ 45	- 16	- 28	
MEANS	- 25	- 21 - 6	+ 15	+ 29	+ 62	+144	+215	+157	- 22	-189	-297	-263	-155	- 44	+ 57	+ 98	+ 94	+ 67	+ 43	+ 28	+ 24	0	- 24	
												TABLE 38												
												EASTWARD COMPONENT, 10 DAYS												
JAN	- 27	- 55 - 58	- 55	- 65	- 34	- 47	- 22	+ 83	+249	+359	+186	- 17	-176	-211	-169	- 70	+ 14	- 5	+ 40	+ 41	+ 11	+ 14	+ 4	
FEB	- 37	- 59 - 53	- 62	- 52	- 43	- 42	- 9	+ 19	+ 50	+ 79	+121	+ 8	- 64	- 20	- 27	- 10	+ 42	+ 33	+ 57	+ 35	+ 14	+ 5	+ 10	
MAR	-138	- 39 - 38	- 26	- 17	- 38	+ 27	+ 54	+ 60	- 21	- 64	+ 20	+ 33	- 1	+ 31	- 18	+ 34	+ 80	+ 40	+ 32	+ 26	+ 26	+ 10	- 65	
APR	- 34	- 26 - 68	+ 3	- 4	+ 11	+ 61	+163	+134	+ 44	- 53	- 66	-111	- 83	- 42	- 38	+ 6	+ 14	- 2	+ 20	+ 40	+ 26	+ 42	- 29	
MAY	+ 12	- 29 - 22	- 19	+ 14	- 4	+ 70	+153	+ 99	- 65	-149														

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1936

MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER

1936

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 41																								
NORTHWARD COMPONENT, 10 DAYS																								
JAN	+ 2	- 13	- 24	- 1	- 56	- 73	- 11	+ 179	+ 350	+ 310	+ 150	- 144	- 318	- 257	- 274	- 68	+ 54	+ 44	+ 58	+ 37	+ 50	+ 12	+ 10	+ 3
FEB	- 55	- 23	- 4	+ 17	+ 39	+ 36	+ 81	+ 229	+ 175	- 39	- 158	- 282	- 296	- 136	- 5	+ 104	+ 68	+ 26	+ 72	+ 90	+ 51	+ 30	0	- 4
MAR	- 14	- 20	+ 36	- 21	+ 26	+ 40	+ 158	+ 362	+ 299	- 10	- 280	- 382	- 345	- 251	- 142	+ 11	+ 101	+ 108	+ 78	+ 66	+ 65	+ 42	+ 70	+ 37
APR	+ 39	- 38	+ 40	+ 22	+ 38	+ 99	+ 256	+ 382	+ 141	- 157	- 421	- 364	- 222	- 185	- 97	+ 8	+ 116	+ 151	+ 80	+ 67	+ 40	- 8	- 2	+ 10
MAY	+ 27	- 10	- 29	+ 36	+ 57	+ 139	+ 289	+ 343	+ 198	- 116	- 350	- 356	- 318	- 154	- 105	- 3	+ 33	+ 96	+ 75	+ 43	- 11	- 12	+ 12	+ 17
JUN	- 2	+ 16	+ 32	+ 15	+ 103	+ 146	+ 234	+ 292	+ 205	- 40	- 348	- 394	- 290	- 227	- 75	+ 11	+ 54	+ 100	+ 117	+ 23	- 10	+ 3	+ 25	+ 22
JUL	+ 54	+ 1	+ 26	+ 50	+ 58	+ 154	+ 307	+ 346	+ 259	- 92	- 486	- 616	- 542	- 295	- 60	+ 75	+ 175	+ 228	+ 228	+ 86	+ 30	+ 28	+ 17	- 35
AUG	+ 51	+ 46	+ 19	+ 49	+ 101	+ 166	+ 364	+ 488	+ 216	- 234	- 551	- 535	- 405	- 258	- 57	+ 68	+ 94	+ 164	+ 75	- 4	+ 35	+ 23	+ 31	+ 54
SEP	+ 9	+ 23	+ 43	+ 72	+ 62	+ 137	+ 331	+ 374	+ 169	- 196	- 408	- 485	- 430	- 240	- 38	+ 91	+ 135	+ 134	+ 47	+ 34	+ 45	+ 10	+ 37	+ 32
OCT	- 4	+ 14	+ 12	+ 26	+ 45	+ 78	+ 195	+ 258	+ 84	- 158	- 268	- 296	- 196	- 56	+ 21	+ 57	+ 34	+ 13	+ 49	+ 60	+ 41	+ 15	+ 9	- 11
NOV	- 42	- 42	- 12	+ 28	+ 53	+ 20	+ 128	+ 198	+ 181	+ 13	- 100	- 241	- 267	- 185	- 71	- 16	+ 24	+ 104	+ 72	+ 74	+ 54	+ 24	- 3	+ 12
DEC	- 40	- 25	- 24	- 2	- 8	- 19	+ 24	+ 98	+ 212	+ 210	+ 134	- 90	- 187	- 246	- 185	- 76	+ 32	+ 69	+ 76	+ 64	+ 32	+ 9	- 14	- 35
MEANS	+ 2	- 6	+ 10	+ 24	+ 43	+ 77	+ 196	+ 296	+ 206	- 42	- 257	- 349	- 310	- 208	- 91	+ 22	+ 77	+ 103	+ 86	+ 54	+ 35	+ 15	+ 16	+ 8
TABLE 42																								
EASTWARD COMPONENT, 10 DAYS																								
JAN	- 52	- 6	- 2	- 10	- 41	- 53	- 62	+ 48	+ 146	+ 267	+ 413	+ 263	+ 37	- 259	- 310	- 203	- 128	- 87	- 20	- 39	- 39	+ 35	+ 22	- 9
FEB	- 70	- 38	- 62	- 44	- 28	- 7	+ 54	+ 95	+ 132	+ 64	+ 33	- 69	- 175	- 98	+ 14	+ 12	+ 19	+ 21	- 13	+ 32	+ 52	+ 29	+ 4	+ 31
MAR	- 81	- 51	- 55	- 63	- 35	- 25	+ 33	+ 210	+ 234	+ 63	- 91	- 67	- 17	- 65	- 110	- 72	- 11	+ 54	+ 21	+ 17	+ 21	+ 27	+ 43	+ 10
APR	- 38	- 52	0	- 11	- 19	+ 12	+ 93	+ 269	+ 166	+ 11	- 121	- 150	- 106	- 65	- 27	- 44	+ 63	+ 132	+ 10	+ 36	+ 4	- 64	- 75	- 15
MAY	+ 5	- 42	- 80	+ 10	- 2	- 10	+ 86	+ 201	+ 153	- 17	- 128	- 118	- 98	- 5	- 19	+ 22	+ 23	+ 51	+ 37	+ 31	- 2	- 31	- 32	- 25
JUN	- 33	- 22	+ 14	- 4	+ 33	- 4	+ 55	+ 138	+ 115	- 38	- 148	- 150	- 45	- 40	+ 70	+ 101	+ 30	+ 25	+ 6	- 20	- 38	- 24	- 2	- 28
JUL	- 70	- 65	- 29	+ 3	- 41	- 42	+ 28	+ 156	+ 130	- 18	- 174	- 277	- 181	- 28	+ 77	+ 176	+ 264	+ 170	+ 57	+ 24	+ 33	+ 14	- 60	- 88
AUG	- 26	- 25	- 45	- 46	- 35	- 9	+ 63	+ 192	+ 156	- 41	- 141	- 173	- 22	+ 94	+ 61	+ 26	+ 42	+ 66	+ 26	- 35	- 16	- 41	- 49	- 27
SEP	- 27	- 17	- 21	+ 30	+ 24	+ 27	+ 125	+ 274	+ 226	+ 25	- 138	- 216	- 216	- 110	- 39	- 27	+ 4	+ 51	+ 38	+ 50	- 6	- 41	- 20	+ 10
OCT	- 45	- 51	- 59	- 64	0	+ 60	+ 79	+ 141	+ 88	- 24	- 76	- 74	- 59	- 12	- 4	+ 16	+ 55	+ 15	+ 27	+ 34	+ 17	+ 21	- 8	- 29
NOV	- 40	- 76	- 66	- 31	- 37	+ 14	+ 12	+ 57	+ 141	+ 153	+ 145	+ 19	- 57	- 94	- 68	- 110	- 97	+ 4	+ 42	+ 29	- 10	+ 35	+ 20	- 4
DEC	- 40	- 21	- 32	- 26	- 25	- 16	- 27	+ 25	+ 110	+ 193	+ 240	+ 244	+ 142	- 90	- 197	- 190	- 144	- 96	- 43	- 3	+ 11	+ 9	- 10	- 9
MEANS	- 43	- 39	- 36	- 21	- 17	- 4	+ 45	+ 150	+ 150	+ 53	- 16	- 64	- 66	- 64	- 46	- 24	+ 10	+ 34	+ 11	+ 9	+ 4	- 3	- 14	- 15

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1937

MONTHLY MEAN VALUES, EXPRESSED IN HUNDRETHS OF MILLIVOLTS PER KILOMETER

1937

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 43																								
NORTHWARD COMPONENT, 10 DAYS																								
JAN	- 17	- 27	- 20	- 41	- 29	- 12	+ 17	+ 205	+ 415	+ 450	+ 169	- 297	- 431	- 386	- 266	- 59	+ 110	+ 95	+ 74	+ 60	+ 28	- 10	- 16	- 12
FEB	+ 35	- 62	+ 37	+ 28	- 9	- 4	+ 79	+ 210	+ 221	+ 66	- 114	- 286	- 309	- 187	- 58	+ 27	+ 84	+ 60	+ 73	+ 52	+ 38	+ 15	+ 6	- 18
MAR	- 3	- 12	+ 16	+ 12	+ 24	+ 95	+ 200	+ 333	+ 205	- 84	- 284	- 321	- 286	- 203	- 104	+ 22	+ 56	+ 90	+ 75	+ 70	+ 28	+ 32	+ 14	+ 19
APR	+ 51	+ 55	+ 40	+ 21	+ 17	+ 102	+ 239	+ 417	+ 232	- 36	- 332	- 411	- 304	- 263	- 187	- 66	+ 49	+ 122	+ 131	+ 74	+ 4	+ 26	- 8	+ 24
MAY	+ 6	+ 1	+ 1	+ 77	+ 101	+ 179	+ 312	+ 410	+ 171	- 164	- 445	- 478	- 324	- 192	- 77	+ 64	+ 138	+ 128	+ 54	+ 14	- 16	- 11	- 3	+ 61
JUN	+ 5	+ 24	+ 8	+ 25	+ 68	+ 149	+ 277	+ 328	+ 189	- 66	- 372	- 442	- 392	- 223	- 52	+ 82	+ 154	+ 186	+ 51	- 5	+ 16	- 3	0	- 7
JUL	- 12	+ 14	+ 10	+ 47	+ 115	+ 185	+ 311	+ 281	+ 230	- 140	- 443	- 447	- 406	- 243	- 67	+ 108	+ 156	+ 201	+ 82	- 23	- 8	+ 14	+ 21	+ 8
AUG	- 17	- 5	- 21	+ 54	+ 128	+ 177	+ 425	+ 588	+ 313	- 156	- 538	- 567	- 611	- 409	- 44	+ 94	+ 225	+ 219	+ 58	- 23	+ 16	+ 58	+ 15	+ 29
SEP	+ 48	- 7	+ 4	+ 47	+ 21	+ 148	+ 389	+ 569	+ 210	- 142	- 359	- 493	- 501	- 296	- 58	+ 136	+ 109	+ 29	+ 4	+ 29	+ 13	+ 27	+ 50	+ 33
OCT	+ 16	- 5	+ 8	+ 25	- 64	+ 68	+ 249	+ 436	+ 229	- 80	- 242	- 382	- 315	- 148	- 34	+ 53	+ 73	+ 12	+ 60	+ 29	- 10	+ 7	+ 14	- 1
NOV	- 14	- 36	- 4	+ 36	+ 15	+ 53	+ 155	+ 276	+ 112	- 47	- 152	- 263	- 261	- 154	- 39	+ 33	+ 33	+ 58	+ 65	+ 49	+ 41	+ 40	+ 5	- 6
DEC	- 44	- 33	- 17	- 1	- 43	+ 16	+ 6	+ 159	+ 291	+ 278	+ 78	- 277	- 307	- 175	- 62	- 35	+ 62	+ 78	+ 61	+ 59	+ 57	- 7	- 36	- 59
MEANS	+ 4	- 8	+ 5	+ 28	+ 29	+ 96	+ 222	+ 351	+ 235	- 14	- 253	- 389	- 371	- 240	- 87	+ 38	+ 104	+ 106	+ 66	+ 32	+ 17	+ 16	+ 5	+ 6
TABLE 44																								
EASTWARD COMPONENT, 10 DAYS																								
JAN	- 16	- 13	- 16	- 44	- 59	- 13	- 26	+ 63	+ 237	+ 413	+ 515	+ 201	- 131	- 352	- 408	- 260	- 79	- 17	+ 16	+ 11	- 5	- 8	- 10	+ 11
FEB	+ 15	- 87	- 46	- 31	- 57	- 37	+ 13	+ 99	+ 162	+ 141	+ 113	- 28	- 57	- 83	- 96	- 87	- 33	+ 58	+ 57	+ 51	- 15	+ 13	- 14	- 46
MAR	- 53	- 59	- 12	- 25	- 5	+ 53	+ 118	+ 192	+ 138	- 17	- 174	- 123	- 49	- 32	- 66	- 68	- 14	+ 74	+ 70	+ 29	+ 17	+ 38	- 13	- 16
APR	+ 8	+ 20	+ 2	- 16	- 31	- 11	+ 70	+ 311	+ 244	+ 74	- 18	- 104	- 62	- 116	- 146	- 142	- 67	+ 27	+ 36	+ 38	- 25	- 15	+ 17	- 16
MAY	- 32	- 30	- 41	+ 9	- 5	- 33	+ 59	+ 294	+ 235	+ 95	- 91	- 199	- 180	- 92	- 12	+ 51	+ 91	+ 42	+ 3	- 29	- 23	- 41	- 54	- 6
JUN	- 2	- 2	+ 29	- 28	- 44	- 18	+ 75	+ 182	+ 104	- 22	- 113	- 115	- 82	- 26	+ 65	+ 117	+ 116	+ 67	- 72	- 65	- 5	- 8	- 57	- 93
JUL	+ 50	+ 14	+ 7	+ 5	- 9	- 77	+ 7	+ 128	+ 119	- 92	- 225	- 192	- 169	- 11	+ 53	+ 138	+ 125	+ 129	+ 80	+ 6	- 11	- 22	- 32	- 63
AUG	+ 14	- 37	- 68	+ 12	+ 41	- 30	+ 120	+ 393	+ 350	+ 78	- 133	- 354	- 318	- 255	- 55	0	+ 105	+ 111	+ 17	- 16	- 25	+ 29	+ 21	+ 8
SEP	- 49	- 49	- 37	+ 1	- 15	+ 42	+ 191	+ 418	+ 297	+ 124	- 35	- 190	- 233	- 207	- 163	- 57	- 33	- 9	- 56	- 47	- 22	+ 40	+ 62	+ 29
OCT	- 72	- 114	- 60	- 116	- 30	+ 28	+ 206	+ 331	+ 333	+ 154	+ 92	- 97	- 131	- 87	- 79	- 52	- 41	- 80	- 79	- 59	- 45	+ 1	+ 2	- 17
NOV	- 53	- 78	- 89	- 50	- 53	- 15	+ 43	+ 139	+ 152	+ 102	+ 128	+ 37	- 85	- 135	- 94	- 55	- 25	- 33	+ 1	+ 41	+ 48	+ 29	+ 51	- 6
DEC	+ 18	+ 14	- 8	+ 20	- 27	- 4	- 41	+ 81	+ 178	+ 233	+ 233	+ 65	- 117	- 233	- 262	- 149	- 57	+ 1	- 10	+ 58	+ 72	+ 14	- 39	- 30
MEANS	- 23	- 35	- 28	- 22	- 24	- 5	+ 75	+ 219	+ 211	+ 107	+ 24	- 92	- 134	- 136	- 105	- 47	+ 7	+ 26	+ 5	+ 2	- 3	+ 6	- 6	- 15

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1938

MONTHLY MEAN VALUES, EXPRESSED IN HUNDRETHS OF MILLIVOLTS PER KILOMETER

1938

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 45																								
NORTHWARD COMPONENT, 10 DAYS																								
JAN	-53	-37	-90	-12	-52	-8	+58	+103	+244	+226	+46	-255	-276	-291	-187	-23	+81	+136	+79	+138	+144	+90	-3	-58
FEB	+13	-29	-24	+6	-9	+10	+7	+115	+244	+270	+134	-104	-297	-336	-265	-132	-3	+104	+118	+60	+45	+26	+22	+14
MAR	-13	-21	-1	+3	+30	+31	+187	+352	+294	+49	-197	-368	-401	-271	-134	+4	+110	+88	+99	+64	+76	-16	+21	+20
APR	+3	+11	+30	+80	+80	+148	+270	+399	+312	-142	-347	-393	-353	-298	-205	-98	+24	+193	+176	+41	+25	+42	+45	-35
MAY	-13	+40	+21	+54	+83	+156	+278	+319	+101	-215	-393	-387	-244	-143	-56	+29	+79	+111	+108	+13	+12	-1	+32	+23
JUN	+63	+16	+34	+80	+64	+190	+283	+323	+122	-196	-469	-491	-381	-249	-3	+148	+204	+168	+131	+15	-15	-45	-13	+12
JUL	-6	-28	+12	+41	+75	+182	+386	+441	+273	-173	-558	-622	-489	-297	-59	+140	+243	+191	+136	+17	+6	+22	+47	+30
AUG	+10	-12	-26	+20	+112	+177	+410	+499	+148	-340	-550	-512	-365	-177	+13	+129	+134	+140	+17	+1	+44	+28	+42	+50
SEP	+34	+30	+76	+53	+17	+85	+285	+389	+217	-110	-320	-461	-391	-223	-8	+109	+64	+22	+32	+105	+13	-16	-10	+9
OCT	+13	+14	+36	+7	-45	+18	+273	+315	+199	-61	-296	-371	-254	-145	-28	+5	+21	+33	+60	+56	+52	+46	+46	-4
NOV	-32	-34	-17	-17	+1	+46	+177	+321	+235	+63	-117	-295	-377	-235	-98	+6	+73	+77	+68	+68	+36	+40	+12	0
DEC	-49	-55	-45	-42	-47	+6	+25	+216	+392	+353	+13	-316	-370	-290	-176	+20	+102	+94	+75	+66	+45	+21	-2	-34
MEANS	-2	-9	0	+23	+26	+87	+220	+316	+232	-23	-254	-381	-350	-246	-100	+28	+94	+113	+92	-54	+40	+20	+20	+2
TABLE 46																								
EASTWARD COMPONENT, 10 DAYS																								
JAN	-54	-29	-104	-30	-49	-49	-29	+65	+117	+199	+267	+189	+28	-200	-250	-186	-23	+61	-51	+94	+78	-36	-3	-15
FEB	-28	-76	-68	-17	-46	-24	-71	0	+80	+189	+284	+234	+50	-30	-94	-151	-166	-55	+18	+6	0	-27	+9	-9
MAR	-63	-49	-68	-85	-2	-11	+40	+147	+190	+68	-27	-53	-48	-59	-51	+3	+47	+44	+61	+1	-26	-50	-17	+5
APR	-70	-53	-19	+19	+20	-11	+70	+240	+231	+9	-60	-19	-96	-111	-86	-126	-32	+150	+88	-58	-55	+28	-14	-52
MAY	-67	-7	-1	+18	+28	+32	+69	+174	+166	-65	-179	-126	-143	-27	+82	+70	+60	+16	+12	+15	+8	-75	-54	-7
JUN	-16	-22	-45	+56	-23	-4	+86	+237	+112	-163	-242	-251	-143	-18	+123	+212	+210	+92	+23	-10	-55	-63	-75	-30
JUL	-3	-63	-66	-16	+2	-4	+69	+230	+222	-3	-251	-282	-291	-142	+58	+206	+234	+134	+39	-18	-34	-18	+23	-28
AUG	-94	-61	-68	+14	+53	+16	+191	+366	+168	-162	-250	-174	-85	+12	+107	+104	+115	-37	-63	-58	-38	-30	+11	+40
SEP	-59	-22	-15	-36	+6	+99	+176	+294	+254	+104	-64	-190	-176	-107	-43	-7	-17	-4	+34	+33	-36	-45	-65	-40
OCT	-38	-25	-46	-58	-40	-73	+112	+181	+168	+128	+26	+6	-31	-41	-65	-126	-100	-5	+6	+8	+34	+13	-4	-32
NOV	-51	-44	-35	-31	-66	+9	+58	+205	+239	+200	+125	+29	-155	-123	-153	-119	-78	-40	-40	-12	-7	+28	+18	+32
DEC	-40	-56	-26	-60	-45	-20	-32	+30	+201	+386	+317	+113	-112	-233	-273	-124	-23	-45	-21	-5	+1	+39	+21	-4
MEANS	-49	-42	-47	-19	-14	-3	+62	+181	+179	+74	-4	-44	-100	-90	-54	-20	+19	+26	+3	0	-11	-20	-12	-18

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1939 MONTHLY MEAN VALUES, EXPRESSED IN HUNDRETHS OF MILLIVOLTS PER KILOMETER 1939

(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)																								
MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 47																								
NORTHWARD COMPONENT, 10 DAYS																								
JAN	- 92	- 73	- 57	- 39	+ 3	+ 2	- 4	+202	+344	+346	+118	-252	-404	-349	-223	- 64	+131	+ 91	+108	+ 85	+ 56	+ 50	+ 22	- 25
FEB	+ 23	- 51	- 47	- 11	- 73	+ 38	+ 4	+ 62	+149	+120	- 5	-150	-331	-214	- 95	+ 56	+ 51	+110	+ 96	+112	+ 93	+ 60	+ 52	- 46
MAR	+ 12	- 37	+ 74	+ 60	+ 17	+ 38	+124	+200	+172	- 39	-165	-244	-241	-199	-164	- 8	+ 55	+ 71	+ 58	+109	+ 34	0	+ 56	+ 12
APR	- 50	- 41	- 11	- 5	- 18	+117	+244	+354	+318	+ 73	-269	-409	-325	-359	-257	- 61	+ 99	+160	+172	+147	+ 81	- 1	+ 18	+ 15
MAY	+ 15	- 56	+ 34	+ 17	+ 80	+157	+312	+342	+178	-144	-412	-451	-316	-206	- 88	+ 20	+100	+136	+ 53	0	+ 25	+126	+ 19	+ 78
JUN	- 45	- 19	- 10	+ 99	+132	+202	+309	+355	+102	-192	-369	-422	-306	-246	-115	- 10	+158	+141	+105	+107	- 41	- 3	+ 30	+ 24
JUL	- 23	- 57	- 45	+ 73	+ 85	+215	+307	+347	+263	-153	-395	-446	-412	-257	-111	+ 81	+158	+136	+148	+ 22	- 10	+ 17	+ 28	+ 28
AUG	- 2	+ 37	+ 25	+ 55	+ 94	+193	+396	+512	+245	-226	-451	-498	-450	-266	- 78	+118	+184	+162	+ 51	+ 36	- 11	- 27	- 56	- 25
SEP	+ 26	+ 52	+ 65	+ 80	+ 47	+160	+383	+459	+221	-205	-392	-488	-407	-195	- 46	+ 47	+ 86	+ 8	+ 2	- 7	+ 6	+ 35	- 10	+ 54
OCT	0	+ 3	- 20	- 20	+ 30	+ 64	+223	+351	+232	- 77	-258	-325	-272	-136	- 16	+ 16	+ 17	+ 37	+102	+ 51	+ 40	+ 11	- 47	- 30
NOV	- 80	- 28	- 55	+ 24	- 22	+ 36	+112	+256	+262	+ 5	-213	-281	-217	-144	- 8	+ 60	+ 36	+ 95	+ 83	+ 52	+ 51	+ 17	+ 14	- 15
DEC	- 43	- 60	+ 4	- 25	+ 14	+ 31	+ 74	+ 78	+176	+136	+ 49	-174	-266	-188	-123	- 75	+ 17	+107	+107	+ 95	+ 48	+ 25	+ 33	- 26
MEANS	- 22	- 28	- 4	+ 26	+ 32	+104	+207	+293	+222	- 30	-230	-345	-329	-230	-110	+ 15	+ 91	+104	+ 90	+ 68	+ 32	+ 26	+ 13	+ 2
TABLE 48																								
EASTWARD COMPONENT, 10 DAYS																								
JAN	- 72	- 74	- 54	- 69	- 54	- 15	- 25	+ 42	+326	+406	+417	+175	-120	-230	-381	-302	- 86	+ 78	+ 1	+ 20	+ 36	+ 58	+ 28	- 11
FEB	- 46	- 67	- 45	- 75	- 81	- 15	- 42	- 98	- 24	+108	+159	+189	- 59	-136	- 20	+ 48	+ 28	+ 61	+ 27	+ 24	+ 32	+ 12	+ 11	+ 3
MAR	- 58	-152	- 54	+ 30	- 58	+ 7	+ 72	+ 59	+100	- 76	- 9	+ 92	+162	+ 26	- 58	- 29	+ 47	- 41	- 28	+ 54	- 33	- 60	+ 23	- 11
APR	- 83	- 65	- 55	- 16	- 35	+ 3	+ 51	+230	+254	+227	+116	+ 12	- 89	-162	-144	- 85	- 58	- 21	+ 78	+ 16	+ 21	- 55	- 44	- 94
MAY	- 1	-132	+ 51	- 34	- 27	- 45	+ 91	+263	+211	- 15	-131	-158	-180	- 61	+ 25	+ 28	+ 76	+ 21	- 27	- 54	+ 37	+ 13	+ 37	+ 9
JUN	- 92	- 45	+ 3	+ 66	+ 26	+ 3	+ 89	+189	+ 43	-108	-140	-133	- 39	- 27	+ 35	+ 23	+120	+ 55	- 9	+ 25	- 72	- 7	+ 34	- 36
JUL	- 10	+ 5	- 50	+ 5	- 28	+ 4	+126	+204	+148	- 42	-109	-175	-155	- 17	- 38	+ 72	+126	+ 72	+ 70	- 45	- 37	- 68	- 27	- 28
AUG	- 37	+ 4	+ 5	- 21	+ 13	+ 29	+200	+364	+270	+ 15	-109	-130	-231	-214	-136	- 59	+ 38	+ 42	- 6	+ 44	- 2	- 33	- 23	- 26
SEP	- 33	- 27	- 50	+ 18	- 39	+ 39	+164	+405	+350	+ 96	- 79	-184	-194	- 74	- 50	- 78	+ 13	- 53	- 84	- 74	- 30	- 13	- 40	+ 33
OCT	- 40	- 26	- 50	- 74	- 61	- 40	+ 61	+102	+206	+ 88	+ 8	- 83	-134	- 49	- 20	- 40	+ 20	+ 18	+ 58	+ 53	+ 51	- 9	- 35	- 11
NOV	- 60	- 33	- 44	- 5	+ 33	+ 73	+ 20	+115	+212	+161	+ 44	- 34	- 59	-110	- 78	- 83	-102	- 44	- 67	- 18	+ 13	+ 10	- 28	- 21
DEC	- 19	- 77	+ 1	- 16	0	+ 21	+ 51	- 40	+ 52	+149	+247	+134	- 40	-108	-173	-211	- 99	- 61	+ 32	+ 84	+ 4	+ 15	+ 50	- 8
MEANS	- 46	- 57	- 28	- 16	- 26	+ 5	+ 72	+153	+171	+ 84	+ 34	- 25	- 95	- 97	- 86	- 60	+ 10	+ 11	+ 8	+ 11	+ 2	- 11	- 1	- 17

1940

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
												TABLE 49												
												NORTHWARD COMPONENT, 10 DAYS												
JAN	- 35	- 62	- 31	- 49	+ 10	+ 27	+ 25	+160	+197	+170	- 58	-324	-280	-179	- 71	+ 67	+101	+100	+ 92	+ 83	+ 48	+ 34	+ 8	- 27
FEB	- 34	- 29	- 23	-120	- 38	- 17	+ 21	+ 56	+133	+ 49	- 67	-142	-195	-163	- 35	+ 88	+100	+ 64	+102	+ 73	+ 55	+ 53	+ 4	- 9
MAR	- 1	- 19	- 26	+ 17	- 13	+ 16	+ 88	+233	+203	+ 25	-114	-241	-277	-216	- 86	+ 30	+ 96	+ 63	+ 49	+ 72	+ 59	+ 6	+ 32	+ 6
APR	+ 41	+ 41	+ 66	+ 82	+ 52	+ 99	+235	+408	+270	-130	-381	-406	-315	-266	-182	- 53	+ 79	+169	+ 71	+ 42	+ 25	+ 32	+ 34	- 19
MAY	+ 32	+ 42	+ 42	+ 91	+ 93	+166	+213	+257	+ 84	-197	-370	-336	-259	-209	-125	- 22	+118	+153	+ 76	+ 46	+ 8	- 2	+ 47	+ 51
JUN	- 13	- 10	+ 40	+ 46	+121	+166	+342	+323	+ 28	-207	-481	-474	-246	-170	- 35	+148	+195	+144	+ 46	- 19	- 9	- 7	+ 43	+ 39
JUL	- 15	- 11	+ 45	+ 92	+ 62	+132	+240	+271	+142	-140	-385	-483	-399	-266	- 90	+ 85	+222	+201	+101	- 8	+ 4	+ 50	+ 46	+ 74
AUG	+ 23	+ 33	+ 57	+ 83	+ 62	+132	+331	+439	+262	-210	-439	-518	-453	-294	- 46	+129	+150	+168	- 20	+ 8	+ 26	+ 18	- 13	+ 26
SEP	+ 9	+ 18	+ 56	+ 64	+ 16	+104	+287	+336	+ 50	-221	-384	-378	-366	- 2	+100	+184	+130	+ 17	- 20	- 16	+ 43	- 54	- 56	- 23
OCT	- 10	- 15	- 12	+ 3	- 62	+ 48	+162	+247	+141	- 43	-142	-204	-211	-126	- 22	+ 11	+ 20	+ 11	+ 73	+ 72	+ 51	- 12	- 20	+ 34
NOV	-170	-161	- 14	-102	- 42	- 12	- 50	+ 80	+105	+142	+ 84	- 36	-116	-120	- 99	- 48	+ 36	+ 97	+102	+ 69	+ 97	+125	+ 30	- 16
DEC	- 39	- 24	- 85	- 30	- 21	- 72	- 40	+ 48	+112	+197	+ 76	-146	-168	-174	- 87	- 29	+ 5	+132	+101	+ 60	+ 72	+ 54	+ 11	+ 45
MEANS	- 18	- 16	+ 10	+ 15	+ 20	+ 66	+154	+238	+144	- 47	-222	-306	-274	-182	- 65	+ 49	+104	+110	+ 64	+ 40	+ 40	+ 25	+ 14	+ 15
												TABLE 50												
												EASTWARD COMPONENT, 10 DAYS												
JAN	- 15	- 42	- 53	- 66	- 12	+ 2	- 23	+ 35	+ 91	+212	+157	+ 10	-118	-172	-188	- 80	- 22	+ 63	+ 56	+ 45	+ 41	+ 23	+ 35	+ 26
FEB	- 60	- 37	- 28	- 13	0	+ 20	+ 27	- 11	+ 56	+120	+ 8	+ 52	- 2	- 17	- 32	+ 26	- 11	- 30	- 37	+ 16	+ 27	+ 11	+ 12	- 18
MAR	- 29	- 29	- 53	- 24	- 84	- 15	+ 15	+ 75	+ 97	+ 27	- 56	- 24	- 24	- 38	- 54	- 36	+ 24	+ 33	+ 7	+ 42	+ 29	+123	- 6	+ 6
APR	+ 9	+ 5	- 12	+ 16	- 34	- 2	+ 21	+250	+202	+ 39	- 48	- 56	- 42	-144	-138	- 98	- 69	+ 54	+ 48	+ 26	- 2	+ 3	+ 9	- 52
MAY	- 5																							

DIURNAL VARIATION IN EARTH-CURRENT POTENTIAL GRADIENT AT TUCSON MAGNETIC OBSERVATORY

1941 MONTHLY MEAN VALUES, EXPRESSED IN HUNDREDTHS OF MILLIVOLTS PER KILOMETER 1941
(VALUES TABULATED FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED ON 105° WEST MERIDIAN MEAN TIME)

MONTH	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
TABLE 51																								
NORTHWARD COMPONENT, 10 DAYS																								
JAN	-38	-34	-23	-50	-22	-18	-60	+92	+207	+265	+88	-222	-321	-190	-173	+5	+138	+126	+69	+87	+80	+70	-23	-42
FEB	-64	-33	-121	-23	-15	-10	+29	+85	+130	+110	-128	-191	-253	-161	-68	+65	+105	+134	+129	+98	+92	+34	+6	+3
MAR	-91	+4	-50	-41	+69	+76	+152	+300	+184	-32	-222	-288	-264	-166	-64	+10	+124	+124	+142	+46	+8	+5	+33	-44
APR	-28	+6	-10	-8	+9	+20	+193	+262	+108	-89	-240	-236	-163	-157	-104	-7	+80	+132	+84	+52	+33	+37	+19	+3
MAY	-56	+7	-19	+33	+94	+85	+176	+262	+57	-105	-322	-334	-175	-94	-30	+55	+55	+112	+124	+41	+15	+24	+2	+1
JUN	-5	+41	+44	+76	+94	+163	+230	+231	+82	-162	-335	-352	-247	-161	-40	+113	+125	+120	+33	-6	-27	-12	-5	-9
JUL	+29	+18	+49	+38	+97	+143	+283	+335	+178	-187	-479	-508	-362	-244	-97	+130	+232	+194	+50	+28	+7	+11	+40	+6
AUG	-18	+8	+75	+46	+81	+160	+306	+371	+151	-246	-494	-465	-316	-173	+2	+150	+155	+88	+2	+11	+29	+11	+57	+23
SEP	+72	+61	+39	+75	+54	+156	+350	+373	+145	-156	-360	-428	-349	-211	-46	+105	+139	+58	-2	+33	+63	+7	-26	-32
OCT	-3	+42	+16	-26	+1	+86	+223	+290	+146	-92	-277	-366	-253	-128	+40	+74	+74	+31	+88	+27	+28	+4	+16	-30
NOV	-94	-70	-5	-42	-42	+60	+94	+164	+99	-68	-130	-195	-147	-54	+15	+9	+80	+124	+106	+92	+34	+45	-14	-53
DEC	-76	-71	-44	-28	-8	-26	+6	+97	+114	+100	-20	-162	-178	-126	-10	+32	+25	+130	+123	+86	+77	+12	+4	-36
MEANS	-31	-2	-4	+4	+34	+75	+165	+238	+133	-55	-243	-312	-252	-155	-48	+62	+111	+114	+79	+50	+37	+21	+9	-18
TABLE 52																								
EASTWARD COMPONENT, 10 DAYS																								
JAN	-36	-52	-29	-47	+19	+6	+11	-16	+122	+267	+284	+114	-153	-200	-275	-132	+17	+42	-22	+15	+41	+36	+3	-25
FEB	-127	-45	+38	+10	+46	+63	+133	+71	+29	+106	+66	+86	-52	-95	-119	-31	-30	+60	+45	-24	+6	+4	-15	-47
MAR	-109	+9	-50	-7	+63	+104	+105	+234	+194	+56	-55	-72	-85	-100	-100	-115	-5	+66	+87	+40	-100	-25	-33	-99
APR	-89	+8	-1	-9	+9	+31	+116	+232	+122	+34	-29	-11	+1	-49	-58	-75	-86	-51	-10	+11	-5	-8	-20	-61
MAY	-105	-52	-52	-29	+28	+9	+51	+143	+65	-25	-97	-110	-22	+37	+37	+83	+54	+89	+18	+19	-3	-11	-73	-61
JUN	-67	+16	-19	+15	-2	+4	+89	+149	+17	-102	-124	-137	-81	-39	+29	+110	+113	+122	+38	-27	-5	-33	-25	-40
JUL	+4	-13	-4	-2	+29	+28	+98	+219	+183	-122	-277	-285	-173	-36	+61	+145	+171	+92	-45	-26	0	-32	+31	-34
AUG	-3	-72	+5	-36	+1	+12	+111	+248	+214	-39	-192	-168	-142	-106	+4	+100	+91	+57	-8	-37	-37	+8	-3	+15
SEP	+7	-7	-97	-26	-52	+17	+180	+323	+289	+112	-126	-211	-195	-144	-109	-35	0	-28	-61	-26	-34	-14	-76	-39
OCT	-78	-19	-46	-50	-27	+38	+118	+198	+227	+69	-43	-146	-116	-95	-46	-41	+17	+4	+39	-1	+54	+19	-1	-74
NOV	-13	-66	-17	-43	-79	-1	+33	+47	+30	+33	+46	+23	-3	+12	-26	-90	-55	+6	-1	+7	+61	+76	+18	+3
DEC	-17	-51	-42	-46	-42	-18	+17	+7	+78	+131	+96	+71	-13	-68	-35	-83	-120	-30	+10	+44	+52	+42	+28	-24
MEANS	-53	-29	-26	-22	-1	+24	+88	+155	+131	+43	-38	-75	-86	-74	-53	-14	+14	+36	+8	0	+2	+5	-14	-40

TABLE 55

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY		COMPONENT NORTHLY										LENGTH IN KMS										DIRECTION N 19°.5 E																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		LINE		OM		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8		56.8	

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD LINE 0W LENGTH IN KMS 93.9 DIRECTION E 0° 5 N

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7	X	+ 34	- 92	- 143	- 152	- 152	- 67	- 156	- 165	- 30	- 122	+ 183	- 122	- 34	+ 247	+ 214	- 244	- 351	- 92	- 85	+ 43	+ 40	+ 30	- 177	+ 61	- 56
8		- 281	+ 348	- 330	- 98	- 159	- 76	- 268	- 192	- 95	- 92	+ 146	+ 152	+ 18	- 40	- 6	+ 482	+ 73	- 363	- 43	- 24	- 27	+ 30	+ 183	- 259	- 41
9		- 122	- 156	- 183	- 122	- 326	+ 18	- 162	+ 110	+ 152	- 177	+ 384	+ 317	+ 70	- 217	- 265	- 207	+ 427	- 76	- 162	- 214	- 149	- 67	- 119	- 67	- 55
10		- 122	- 134	- 180	- 314	- 55	+ 92	- 235	- 34	..	..	+ 30	+ 165	- 113	- 162	- 217	- 79	- 180	- 85	- 30	+ 278	- 46	- 195	- 58	- 281	..
11		+ 152	+ 85	- 278	- 61	- 274	- 92	- 171	- 34	+ 92	+ 113	+ 485	+ 339	- 381	- 46	- 668	- 214	+ 244	+ 61	- 314	- 92	+ 27	- 192	+ 116	- 88	- 50
12		- 46	- 171	0	- 143	- 61	- 61	- 58	+ 88	+ 152	- 189	+ 305	+ 6	- 214	- 271	- 21	- 299	- 34	+ 34	+ 427	- 375	- 64	+ 34	- 67	+ 52	- 44
13	X	- 61	- 116	- 180	- 232	- 223	- 104	- 146	+ 3	+ 146	+ 119	- 195	- 146	- 128	- 152	+ 12	0	- 195	+ 88	- 46	+ 241	+ 40	- 122	- 122	- 113	- 68
14	X	- 92	- 119	- 131	- 140	- 168	- 156	- 49	- 34	+ 3	+ 18	+ 92	+ 46	- 58	- 3	- 360	+ 139	- 104	- 183	- 85	- 79	+ 40	+ 101	- 82	+ 37	- 55
15		- 241	- 146	+ 372	- 348	- 30	- 159	- 92	- 3	+ 64	+ 107	+ 92	+ 156	- 21	- 458	- 366	- 290	- 67	+ 15	- 64	+ 34	+ 37	- 34	- 52	- 98	- 66
16	X	- 192	- 76	- 34	- 34	- 204	- 214	- 149	- 67	+ 30	+ 308	+ 381	- 88	- 271	- 281	- 113	- 183	- 122	+ 125	- 162	- 61	- 27	- 49	- 61	- 247	- 75
17	X	- 119	+ 52	- 88	- 122	- 110	- 61	- 116	+ 30	+ 152	+ 403	+ 70	+ 21	- 259	- 491	- 482	- 271	- 18	0	- 52	- 92	- 30	+ 27	- 61	- 76	- 71
18	X	- 34	- 40	- 104	- 143	- 149	- 137	- 119	- 159	- 30	+ 131	+ 131	+ 122	0	- 241	- 244	- 244	- 180	- 21	- 58	- 6	- 46	- 64	- 55	- 88	- 74
19	X	- 101	- 119	- 98	- 149	- 116	- 119	- 125	- 61	+ 9	+ 146	+ 210	+ 95	+ 6	- 183	- 339	- 308	- 152	- 64	+ 30	+ 55	- 61	- 73	- 61	- 101	- 70
20	X	- 116	- 95	- 30	- 159	- 101	- 27	- 95	- 192	- 229	+ 104	+ 290	+ 308	+ 30	- 271	- 348	- 250	- 140	- 92	- 55	- 64	- 18	- 79	- 58	0	- 70
21	X	- 95	- 152	- 204	- 140	- 116	- 116	- 149	- 70	+ 15	+ 241	+ 400	+ 189	+ 37	- 253	- 393	- 342	- 244	- 122	- 73	- 9	+ 6	+ 37	- 58	- 67	- 70
22	X	- 92	- 152	- 116	- 152	- 131	- 131	- 156	- 116	+ 64	+ 232	+ 247	+ 27	- 70	- 192	- 296	- 247	- 183	- 70	+ 30	- 98	- 30	- 3	- 64	- 85	- 74
23		- 101	- 140	- 134	- 189	- 125	- 149	- 195	- 131	+ 30	+ 131	+ 305	+ 95	+ 95	- 95	- 229	- 427	- 15	+ 15	- 30	- 30	- 24	+ 64	+ 30	- 52	- 62
24		- 156	- 88	- 214	- 183	- 107	- 58	- 116	- 110	+ 119	- 37	+ 317	+ 85	- 113	- 214	- 265	- 30	+ 37	- 171	- 88	+ 95	+ 427	+ 58	- 116	- 204	- 89
25		- 293	- 244	- 15	- 375	+ 207	+ 88	- 149	- 27	+ 409	- 241	+ 613	+ 186	- 122	- 183	- 223	- 162	+ 64	+ 52	+ 55	+ 73	- 49	- 92	- 143	- 210	- 33
26		+ 79	- 125	- 430	- 46	+ 95	- 131	- 140	- 122	+ 30	+ 207	+ 262	- 46	- 354	- 305	+ 156	+ 116	+ 177	+ 143	- 88	- 448	- 55	- 174	- 125	- 113	- 60
27		+ 27	- 336	- 204	- 46	- 259	- 369	+ 244	+ 95	+ 580	- 259	+ 256	+ 43	- 152	- 171	- 336	- 67	+ 421	+ 58	- 146	+ 152	- 34	- 186	- 58	- 55	- 33
28		- 488	- 67	+ 67	- 134	- 52	- 518	- 235	+ 226	+ 92	+ 274	+ 244	+ 220	- 149	- 580	- 149	- 152	+ 427	+ 34	- 34	- 214	- 34	- 159	- 61	+ 156	- 89
29		- 207	- 122	- 183	- 207	- 152	- 101	- 134	- 171	+ 18	+ 214	+ 342	+ 214	- 192	- 244	- 332	- 226	+ 3	- 92	- 46	+ 30	- 30	+ 92	+ 18	- 82	- 66
30		- 85	- 152	- 168	- 146	- 214	- 214	- 92	- 52	- 6	+ 116	+ 183	- 101	- 92	- 64	- 137	- 67	- 76	- 131	- 55	+ 152	+ 95	- 92	+ 6	- 372	- 74
31		- 34	+ 159	- 293	- 409	- 21	+ 70	- 152	- 171	+ 244	+ 30	+ 146	+ 128	- 30	- 189	- 256	- 116	- 131	- 137	- 58	- 37	- 73	- 125	- 61	- 58	- 66
MEANS ALL DAYS		- 111	- 86	- 133	- 164	- 123	- 120	- 124	- 55	+ 84	+ 74	+ 245	+ 94	- 107	- 204	- 227	- 148	- 41	- 44	- 50	- 40	- 2	- 43	- 52	- 89	- 61
MEANS 10 DAYS		- 87	- 91	- 113	- 142	- 147	- 113	- 126	- 83	+ 13	+ 158	+ 181	+ 45	- 75	- 182	- 235	- 190	- 169	- 43	- 56	- 7	- 9	- 20	- 80	- 68	- 68

* = 10 LEAST DISTURBED DAYS

TABLE 57

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1932
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
FEBRUARY 1932
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-173	-219	-306	-137	-128	-141	-192	-82	+18	+182	+109	-164	-310	-358	-278	-141	-96	-78	-100	-128	-114	-50	-146	-105	-131
2	X	-137	-205	-274	-201	-150	-210	-150	+5	+96	+123	+36	-160	-383	-433	-406	-310	-178	-41	-269	-41	+68	-50	+82	+178	-125
3		+150	+242	-638	+14	+100	-319	-46	-784	-141	+137	-105	-46	-100	+46	-365	-775	-447	-100	+547	-87	-219	-242	-36	-775	-166
4		-91	+50	-228	-638	-360	+356	-114	-23	-150	+233	+237	+128	-447	-629	-451	-233	+233	-59	-91	-182	+324	-319	+187	-388	-111
5		-182	-406	-269	-141	-228	-178	-146	-82	+82	+269	-182	-401	-388	-223	-87	-91	+105	+100	+55	-68	-164	-269	-264	-160	-138
6		-146	-648	+210	-87	-442	-27	-132	-137	-14	+237	+369	-141	-497	-561	-456	+96	+87	+23	-128	-100	+5	+5	-187	-41	-113
7		-310	-260	-492	+32	-82	-178	-150	0	-164	+100	+328	+360	+32	+114	+91	+465	+146	+123	+233	+5	-228	0	-160	-32	-1
8		+538	+246	-150	-46	-78	+251	+233	-128	+91	+242	-137	-141	-306	-296	-474	-150	-87	+55	-87	-68	-78	-82	-119	-365	-47
9		-269	-78	-41	-100	-561	-36	-41	-14	+87	+255	+91	-356	-534	-629	-288	+91	+59	+46	+233	+82	-32	-187	-114	-91	-99
10		-433	+59	0	-246	-274	-150	-192	+27	-105	-132	+100	-46	-483	-365	-128	-187	+123	-18	-109	-233	-96	-187	-114	-146	-139
11		-205	-141	-182	-223	-201	-187	-128	+27	-50	+315	-242	-378	-556	-182	-178	+214	+141	-155	+50	+150	-105	+36	-415	-611	-134
12		-251	-46	0	-456	-497	+46	-55	+223	+137	+41	-210	-219	-283	-543	-196	+46	+128	-46	-214	-36	+5	+36	+46	-447	-116
13		-187	-137	-223	-178	-479	-64	-128	-260	+137	+164	+50	-100	-378	-378	-251	-182	-55	-46	+356	-192	+41	+9	-160	-383	-126
14		-264	-237	-91	-278	-360	-46	-46	+91	-146	0	-41	-274	-238	-347	-406	-182	+137	-18	-141	-5	-87	-155	-82	-87	-137
15	X	-128	-274	-173	-173	-219	-87	-347	-187	-68	+32	-41	-91	-141	-274	-351	-155	-96	-41	-5	-96	-87	-100	-146	-119	-140
16	X	-155	-141	-182	-96	-150	-87	-100	-141	+5	+87	-46	-182	-369	-347	-233	-192	-182	-46	-46	-64	+9	-141	-141	-160	-129
17	X	-173	-178	-214	-155	-137	-100	-137	-150	-100	-36	-36	-96	-182	-319	-287	-228	-214	-87	-46	-87	-132	-128	-146	-128	-146
18	X	-182	-264	-210	-87	-223	-146	-187	-160	-91	-23	-5	-27	-182	-219	-132	-169	-169	-41	-96	+82	+502	-210	-55	+210	-87
19		-251	-178	-164	+27	-100	-64	-100	-78	-123	-164	-32	-182	-141	-187	-173	-178	+5	+46	+160	+5	-91	+91	+720	-492	-68
20		-128	1496	+720	-274	+132	-146	-196	-73	-771	-575	-46	+14	-178	-278	-82	+41	-9	+46	-55	-114	-96	-87	-82	-178	-163
21		-278	-132	-237	-420	+173	-68	-324	-9	+201	+91	+137	-82	-283	-406	-260	-46	+46	+96	0	-91	-50	+14	-137	-87	-90
22		-219	-561	-91	+50	-68	-223	-515	-73	+123	+410	+128	-255	-301	-319	-237	-91	+73	+310	+392	-182	-223	-137	-178	-187	-99
23		-264	-192	-182	-182	-187	-237	-132	-82	-78	-160	-128	+50	+36	-137	-479	-114	-137	+132	+132	+128	-164	-150	+46	-164	-110
24		-784	-182	-269	-369	-315	+333	+78	+55	+100	-46	-109	-228	-365	-264	-296	-137	-50	-46	-46	+46	+155	+319	-807	-219	-144
25		-146	-283	-214	-260	-269	+41	-36	-114	+14	+119	-105	-223	-210	-415	-237	-182	-36	-96	+18	+91	-114	-150	-205	-210	-134
26	X	-187	-342	-150	-182	-192	-82	+50	+96	+128	-55	-105	-283	-310	-360	-251	-228	-82	-27	-32	-41	-91	-91	-150	-132	-129
27	X	-201	-178	-228	-210	-169	-128	-96	0	+46	+9	-223	-369	-319	-205	-178	-137	-82	-68	-87	-100	-55	-46	-50	-182	-136
28	X	-123	-146	-169	-187	-182	-160	-87	-18	+46	-46	-187	-324	-205	-96	-87	-132	-96	-87	-82	-9	-123	-160	-141	-160	-123
29	X	-150	-82	-100	-105	-127	-100	-128	-96	-27	-55	-182	-278	-228	-128	-87	+5	+27	-114	-109	-64	-46	-91	-114	-137	-105
MEANS ALL DAYS		-184	-221	-157	-183	-199	-74	-122	-75	-25	+60	-20	-155	-284	-301	-248	-113	-24	-8	+15	-48	-44	-87	-106	-200	-117
MEANS 10 DAYS		-161	-203	-201	-153	-164	-124	-137	-73	+5	+22	-68	-197	-263	-273	-229	-169	-117	-63	-87	-55	-7	-107	-101	-74	-125

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT EASTWARD										LINE		OW		LENGTH IN KMS										93.9		DIRECTION		E 0°.5 N	
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	- 60	-114	-163	-123	- 63	-114	-184	-123	- 57	+190	+157	+ 39	- 63	-181	-150	- 54	-175	- 60	- 51	- 69	- 63	+ 45	- 60	- 60	- 65					
2	X	- 84	- 87	-187	-160	- 90	-114	-117	- 39	+ 36	+ 57	+117	+ 72	- 90	-274	-337	-316	-241	- 60	-337	+ 54	+138	+ 63	+120	+235	- 68					
3		+244	+313	-388	- 51	- 57	- 30	+ 33	-554	-205	+196	+126	+349	+512	- 93	- 90	+1084	-569	-181	+244	-265	+ 90	-126	-114	-626	- 97					
4		- 90	+247	-111	-286	-433	+268	- 24	+147	+ 75	+ 63	+421	+427	-163	-445	-581	- 90	-157	-141	-241	- 90	+199	-271	+147	0	- 53					
5		- 60	-253	-150	-135	-184	-169	-114	- 66	+ 90	+439	+ 60	-241	-169	- 60	- 75	-184	+ 54	-102	+ 66	- 42	- 36	-150	-138	- 42	- 68					
6		-166	-366	+ 72	+147	-334	- 93	- 30	+ 12	- 33	+214	+406	+175	- 30	-232	-271	+ 90	-120	-199	-150	- 72	+ 66	- 27	-117	+ 33	- 43					
7		-160	-150	-358	- 54	- 54	-123	-157	+ 45	+ 66	+ 60	+241	+154	+ 24	+ 90	+ 96	+325	+ 90	+ 57	+184	- 6	-120	+117	-154	+ 27	+ 10					
8		+244	+169	+120	+157	+ 69	+111	+114	- 39	+ 69	+286	+108	+102	+ 63	-157	-385	-208	-150	+ 60	-147	- 87	- 27	- 6	- 57	-172	+ 10					
9		-202	- 24	+ 42	- 33	-307	-120	-105	- 72	+ 39	+241	+364	+214	-292	-391	-187	- 60	-144	- 33	+138	- 9	- 57	-123	- 33	-286	- 60					
10		-154	+154	- 57	- 24	-226	-120	-172	- 30	+385	+105	- 9	+241	-135	+ 27	+ 3	-289	+ 45	-154	-117	-301	- 33	-214	+ 18	- 51	- 46					
11		-147	- 36	- 84	-138	-135	-163	-120	+ 24	-117	+602	+ 30	-178	-376	+ 90	- 27	+331	+135	-196	- 51	+ 15	-111	+238	-334	-391	- 47					
12		-181	+ 30	+ 18	-169	-448	- 33	-129	+132	+ 9	+105	+ 84	- 21	- 90	-286	+ 27	+123	+178	-241	-283	+ 3	+ 27	- 30	+ 54	-376	- 62					
13		- 6	- 39	- 75	- 90	-265	-123	- 60	-268	- 3	+ 69	+259	+226	- 90	-196	-154	-205	- 45	- 3	+455	-105	+ 81	+117	-190	-301	- 42					
14		-187	-178	- 96	- 57	-364	- 84	- 60	+ 57	-157	+ 45	+ 60	+ 6	+ 60	-175	-295	- 42	+123	+ 42	- 81	+ 57	-138	- 84	+ 3	- 9	- 69					
15	X	- 57	-178	-154	- 30	-196	- 90	-187	-232	-105	- 30	+ 6	+147	+160	- 63	-175	- 96	- 96	- 93	- 87	+ 75	+ 87	0	- 87	- 57	- 64					
16	X	- 63	- 90	-135	- 45	- 90	- 27	- 51	- 96	- 30	+ 60	+ 66	+ 96	- 42	-120	-117	-154	-211	- 45	- 9	- 33	+ 30	- 45	- 75	-114	- 56					
17	X	- 90	- 90	-150	-120	- 84	- 63	-114	-169	-108	- 90	+ 63	+ 96	+ 99	- 75	-147	-178	-205	- 78	- 42	- 45	- 63	- 39	- 54	0	- 73					
18	X	- 87	-178	-147	- 57	-147	-147	-160	-163	-160	- 66	+ 63	+226	+ 91	+126	+105	- 54	-123	- 6	+ 30	+229	+448	-235	-123	+157	- 16					
19		-256	-202	- 99	- 27	-154	-160	-181	-163	-244	-265	+ 30	- 84	+ 60	+ 30	- 63	-114	+ 3	+126	+277	- 12	0	+117	+184	- 39	- 52					
20		- 9	-1135	+602	-126	+ 87	-114	-160	- 9	+ 54	- 30	+ 30	+214	+ 27	- 90	+ 12	+ 6	- 30	+ 6	- 90	-114	- 48	0	+ 9	- 96	- 42					
21		-295	- 75	+ 15	-277	+ 12	- 90	- 99	- 87	+ 72	+ 33	+208	+123	- 48	-187	-235	- 90	- 33	+ 15	- 36	+ 24	- 9	+ 30	- 27	- 60	- 46					
22		- 54	-147	-181	+ 27	- 90	- 57	-150	- 60	+ 21	+301	+271	-105	-126	-169	-184	-120	+ 93	+349	+391	-211	-160	-120	-150	-105	- 31					
23		-208	-139	-150	-154	-184	-247	-175	-105	-108	- 93	- 18	+394	+685	- 30	-608	-147	-178	+117	+175	+187	-160	-132	+114	- 6	- 49					
24		-491	-126	-222	- 57	-448	+286	+181	- 72	- 33	+ 42	+ 60	- 27	-172	-120	-181	- 87	- 33	+ 60	-117	+ 99	+123	-211	- 87	+ 6	- 68					
25		+ 3	-187	-147	-144	-181	- 30	- 75	- 69	+ 63	+114	-117	- 27	- 18	-247	-123	-108	+ 21	-120	+ 30	+ 60	+ 18	-123	-117	- 90	- 67					
26	X	- 66	-247	- 84	- 90	-144	- 60	+ 9	+ 21	+ 60	- 24	- 36	- 87	- 57	-111	- 57	-154	- 24	- 27	- 75	+ 6	- 30	- 66	- 99	- 36	- 62					
27	X	-111	- 78	-166	-157	-132	- 93	- 84	- 75	- 30	0	- 75	- 93	- 30	+ 57	- 30	- 87	- 84	- 90	- 90	- 87	- 21	+ 30	0	- 84	- 67					
28	X	- 45	- 63	- 84	-105	-120	-120	- 66	- 78	- 90	- 51	- 63	- 60	+ 81	+120	+ 75	- 33	- 63	- 69	- 69	- 15	- 81	- 66	- 66	- 66	- 50					
29	X	- 63	- 45	- 66	- 69	- 93	- 90	-135	-141	- 63	- 63	- 90	- 57	+ 24	+ 36	- 18	- 15	+ 9	- 90	- 72	- 72	- 30	- 45	- 45	-108	- 58					
MEANS ALL DAYS		-100	-114	- 89	- 84	-167	- 69	- 89	- 78	- 23	+ 83	+ 97	+ 80	- 4	-108	-144	-107	- 67	- 40	- 5	- 28	+ 4	- 47	- 51	- 94	- 52					
MEANS 10 DAYS		- 73	-117	-134	- 96	-116	- 92	-109	-110	- 55	- 2	+ 21	+ 38	+ 17	- 48	- 85	-114	-121	- 62	- 80	+ 4	+ 42	- 36	- 49	- 13	- 58					

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 59

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 19° 5' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	-92	-92	-160	-183	-147	-137	-82	-50	-92	-128	-183	-266	-357	-275	-142	-87	+69	-14	-9	-92	-137	-151	-133	-179	-120						
2	X	-224	-188	-229	-174	-192	-174	-133	+128	+137	+124	-147	-412	-421	-321	+366	-14	+220	+476	+41	+92	-133	-279	-362	-412	-93						
3		+41	-224	-504	+5	+357	-513	-96	+302	+87	-50	-284	-371	-403	-137	-133	+147	+673	-408	-179	+133	+238	-298	+32	-298	-78						
4		-188	-247	-151	-550	-412	+311	+96	+192	+50	-37	-224	-46	-188	-458	-518	+87	+50	+92	+128	-284	-197	+215	-220	-147	-110						
5		-760	-32	-412	+183	-110	-96	-32	-46	-87	-224	-252	-412	-330	-133	+467	-366	-179	+412	-46	-238	-179	-238	-284	-114	-146						
6		-101	-389	-321	-46	-243	-362	+50	+252	+238	-142	-540	-279	-128	-412	-298	+46	-87	+41	+37	-142	-137	-96	-119	-92	-136						
7		-64	-220	-467	-5	-60	-160	+23	+156	+215	-92	-559	-412	-495	-179	-243	+270	-298	-568	-197	+815	-458	+119	-307	-321	-146						
8		-701	-183	-559	-147	-243	+18	+14	+179	+284	+50	-238	-426	-728	-495	-192	-128	-92	+50	-82	+495	-192	-220	-550	+60	-168						
9		-385	-179	-266	-179	-229	-362	-183	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		-760	-92	+632	+495	-829	-595	-179	+147	+215	+321	-403	-389	-307	-398	-270	-137	+156	+426	-275	-284	-224	+9	-289	-788	-159						
11		+156	-243	-435	-124	-211	-133	-78	+160	+275	+46	-211	-174	-238	-192	-78	-275	-279	-55	-55	-87	-179	-92	-256	-114	-120						
12		-449	-119	-165	0	-137	-133	-137	+92	+69	-92	-229	-408	-495	-334	-275	-179	-46	-32	-27	+46	+92	-50	-357	-366	-155						
13	X	-321	-183	-270	-311	-179	-179	-78	+18	+169	+220	+137	-55	+275	+279	+275	+101	+5	-142	+220	+206	+188	-55	+174	+215	+30						
14	X	+142	+256	+344	+137	+23	-14	-211	+5	+160	-591	-499	-275	-376	-252	-5	+183	-41	-55	-151	-41	-142	-50	-124	-325	-79						
15	X	-174	-137	-179	-289	-96	-46	-128	+5	+9	-224	-325	-366	-366	-366	-224	-101	-41	-110	-160	-110	-46	-114	-96	-183	-161						
16	X	-165	-101	-183	-82	-69	-82	-46	-46	-110	-252	-472	-449	-261	-220	-92	+14	+9	+5	-78	-92	-142	-55	-174	-133	-136						
17	X	-87	-137	-137	-151	-179	-133	-73	-101	-156	-197	-307	-266	-316	-376	-325	-92	-46	-128	+247	-316	-293	-151	+23	+293	-142						
18		+82	-875	+9	-229	-60	+23	-165	-174	-114	-215	-215	+142	-412	-412	-266	+9	+96	+124	-64	-87	-46	-215	-321	-188	-149						
19		-224	-174	-224	-137	-256	-101	+23	+96	+50	-96	-215	-431	-408	-417	-183	-37	+23	-46	-179	-137	-133	-133	-137	-133	-150						
20		-188	-142	-229	-32	-179	-160	-137	+169	+192	-137	-408	-618	-728	-577	-147	+142	+275	+330	+545	+133	-238	-69	-550	-421	-132						
21		+60	+156	-550	-229	-275	+27	+110	+243	+311	-366	-829	-655	-522	-344	-46	+160	+41	-46	+96	+518	-128	-192	-705	-87	-136						
22		-582	-275	+142	-614	+37	-92	+23	+211	+371	+124	-453	-504	-165	-238	-256	-69	-78	+829	-32	-412	-366	-458	-467	-73	-142						
23		-330	-307	+32	-357	-147	-147	+5	+27	+188	+211	-174	-431	-550	-508	-435	-137	-18	+202	-128	-156	-188	-55	-234	-412	-169						
24		-137	-188	-137	-298	-137	-124	+27	+101	+256	+169	-197	-682	-664	-559	-275	+14	-92	+46	+142	-137	-188	-137	-179	-169	-148						
25	X	-220	-165	-215	-224	-160	-87	-41	+5	+92	+50	-147	-330	-440	-449	-311	-270	-110	-69	-110	-92	-133	-133	-151	-151	-161						
26	X	-183	-183	-192	-137	-101	-87	-92	-82	-14	-82	-256	-412	-504	-467	-316	-114	+18	+41	-5	-96	-92	-124	-124	-160	-157						
27	X	-188	-179	-151	-160	-174	-179	-46	+147	+229	+46	-321	-499	-550	-582	-398	-133	-92	+211	+508	+165	-142	-311	+5	-60	-119						
28		-179	-192	-192	-733	-9	+5	-46	+41	+330	+527	-605	-147	-243	-366	-234	-188	-229	+550	+160	-376	-421	-252	-247	-110	-132						
29		-133	-188	-183	+105	-687	+128	+69	-9	+238	-270	-142	-183	-504	-50	-522	-124	-105	+353	+41	-275	-252	-229	-751	+586	-129						
30		+183	-728	-234	+128	-156	-60	-183	-192	+69	+78	-50	-284	-426	-165	-46	+202	+5	+678	-495	-316	-142	-50	1241	+856	-107						
31		-605	-41	+229	-870	-87	+188	+160	+174	+174	+87	-238	-321	-458	-550	-417	-87	+229	-114	-220	-92	+96	-421	-120	-284	-150						
MEANS ALL DAYS		-213	-194	-170	-168	-171	-103	-46	+72	+128	-38	-300	-345	-390	-332	-185	-39	+1	+103	-11	-42	-144	-143	-275	-124	-130						
	MEANS 10 DAYS	-152	-111	-137	-157	-127	-112	-93	+3	+42	-103	-252	-333	-332	-303	-117	-51	-4	+22	+50	-38	-107	-142	-96	-110	-115						

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	- 36	- 63	-105	-126	- 96	-105	- 90	- 42	- 87	- 90	- 57	- 36	-153	-162	- 99	- 63	+ 90	+ 30	+ 60	+ 48	- 81	- 93	- 42	- 33	- 64						
2	X	-183	-150	-195	-159	-213	-186	-270	- 93	+120	+210	+327	+ 93	- 36	- 96	+750	+192	+ 87	+294	+231	+210	- 72	-183	-312	-207	+ 7						
3		+ 45	+ 6	-261	-120	+171	-120	- 36	+204	- 27	- 30	- 66	- 39	-177	- 24	-117	+171	+630	-486	-369	- 63	+207	- 24	- 66	-447	- 43						
4		+ 72	-144	-153	-390	-210	+228	+ 6	- 12	+ 33	+117	+ 30	+381	+270	-330	- 57	+180	-213	+261	- 87	-135	- 96	+174	-297	+ 93	- 12						
5		-627	- 57	- 33	+ 15	- 81	- 93	- 33	+ 6	+204	+ 24	-219	-123	+ 15	+363	+744	-393	-375	+546	- 66	-330	-207	-240	-318	+ 21	- 52						
6		- 6	-216	-270	+ 63	- 87	-102	-129	- 51	+ 90	- 27	-345	+162	+483	-420	-264	+120	+ 69	+ 18	- 30	-144	- 30	+ 9	- 63	- 33	- 50						
7		+ 33	- 21	-285	- 54	+ 69	-204	- 30	+138	+342	+180	-330	-123	-117	- 90	+ 15	+330	+702	-597	-273	+120	+ 30	+168	- 90	-207	- 12						
8		-435	-165	-288	- 90	-180	- 30	- 42	+ 72	+183	+330	+186	-366	-117	-150	-327	-144	- 30	+ 66	+ 93	+ 48	- 30	-477	+174	- 64	- 64						
9		-255	- 66	-147	-150	-210	+ 21	-288	- 90	0	- 90	+300	+246	+ 57	+ 93	+570	+243	+300	- 87	- 33	+120	-330	+258	+213	+189	+ 36						
10		- 90	+333	+501	+501	- 60	-243	-240	- 27	+ 99	+633	+ 54	-129	+240	-219	+135	-192	+150	+ 87	+210	-375	- 84	+ 60	-390	-543	+ 6						
11		+150	-210	-237	-150	-105	- 78	- 60	- 66	+114	+ 39	-213	+ 21	+ 45	+ 27	+ 63	- 93	-198	- 84	-177	+ 33	-150	- 45	-222	+ 6	- 66						
12		-333	- 66	-150	+ 63	- 9	- 84	- 33	+ 66	+ 6	-117	- 96	- 93	-219	-111	-120	- 51	+ 18	- 30	+ 9	+ 90	+177	- 12	-330	-327	- 72						
13	X	-207	- 93	-174	-213	-150	-102	- 66	- 24	+ 36	+150	+144	+ 30	+132	+129	+144	+ 93	- 42	+ 63	+120	+ 93	+ 78	- 3	+ 72	+120	+ 14						
14	X	+156	+276	+351	+285	+153	+ 90	- 30	- 63	- 6	-324	-270	- 30	-168	- 30	+ 90	+237	+ 3	- 33	- 93	+ 30	- 30	+ 45	- 39	-195	+ 17						
15	X	-150	- 60	-123	-186	- 69	- 33	- 30	- 48	- 60	-216	-156	-144	- 90	-138	-120	- 27	- 60	- 87	- 87	- 69	+ 30	- 15	- 72	- 87	- 87						
16	X	- 84	- 21	-120	- 30	- 30	- 39	- 24	- 69	-120	-177	-261	-150	+ 84	- 30	- 30	+ 66	+ 27	+ 33	- 3	- 36	- 60	- 30	-105	- 33	- 52						
17	X	- 21	- 63	- 90	- 90	-114	- 90	- 87	-150	-153	-150	-153	- 3	+114	-150	-291	- 87	- 24	+ 24	+414	-210	-219	- 75	+150	+180	- 56						
18		+111	-789	+117	-267	- 75	+213	- 57	- 54	+ 57	+126	+ 54	+810	+108	-420	-327	+ 30	- 27	+213	- 33	- 15	- 9	-207	-204	- 30	- 28						
19		-129	-108	-150	-123	-135	- 15	- 15	+ 9	+114	- 90	0	-126	- 15	-240	-129	- 18	- 21	+ 33	- 69	- 48	- 54	-105	- 60	- 42	- 64						
20		- 75	- 60	-147	+ 3	-150	- 57	-228	+240	+180	+120	+ 60	-276	-387	-270	-186	+ 24	+219	+360	+489	+ 57	-375	+123	-435	-399	- 49						
21		- 6	+387	-342	-207	-120	+237	+ 9	+ 48	+279	+ 33	-375	-342	-207	+ 54	+144	- 66	+ 3	- 90	+ 63	+273	+ 60	+186	-540	+ 30	- 20						
22		-180	-357	+381	-408	+ 63	+138	-108	- 21	+342	+315	-123	-162	-201	-240	-252	-159	- 72	+429	+ 90	-135	-360	-450	-333	+ 33	- 74						
23		-270	-183	+ 93	-210	- 87	-162	- 9	- 63	+123	+285	+ 30	-117	-147	-174	-237	- 15	-120	+138	-207	+ 72	-183	- 9	-111	-213	- 74						
24		- 60	- 93	- 63	-189	-117	- 96	- 57	+ 39	+177	+174	- 6	-309	-294	-183	- 66	+141	-138	+ 57	+ 12	+ 21	-123	- 60	- 60	- 66	- 57						
25	X	- 90	- 63	-123	-150	-123	- 45	- 48	- 90	- 69	- 6	+ 36	+ 30	+ 6	- 36	-123	-231	-120	- 60	- 57	- 30	- 60	- 81	- 87	- 33	- 69						
26	X	- 84	- 96	-114	- 87	- 36	- 93	- 75	-117	- 75	- 60	- 12	- 84	-150	-210	-189	-108	- 24	+ 18	+ 27	- 30	- 30	- 39	- 39	- 78	- 74						
27	X	- 84	- 90	- 93	-105	-123	-180	- 75	+ 18	+ 60	+ 54	- 96	+ 48	-147	-384	-300	- 96	- 63	+444	+846	+390	-336	-309	-147	- 39	- 34						
28		- 3	-120	-180	-591	-150	- 30	-153	+ 90	+330	+915	+111	+384	+105	-105	-357	-345	- 78	+744	+270	-369	-543	-234	-177	-111	- 25						
29		-114	-330	-141	- 9	-360	+150	+ 99	- 54	+498	-300	+ 48	+231	- 66	+135	-531	-150	-264	+ 87	+225	-135	-231	-258	-870	+621	- 72						
30		+363	-387	-102	+ 27	- 90	+ 21	+ 33	-126	- 30	+114	+435	+126	-180	-114	- 45	+ 96	+237	+195	-144	-693	- 90	-237	-783	+750	- 26						
31		-486	+ 90	+150	-594	-165	+144	+120	+ 81	+360	+441	+ 63	- 27	-204	-597	-330	- 84	+168	-360	-108	-192	+255	-321	- 66	-195	- 77						
MEANS ALL DAYS		- 99	- 96	- 80	-121	- 93	- 30	- 66	- 8	+101	+ 83	- 29	+ 14	- 54	-132	- 62	- 19	+ 23	+ 69	+ 42	- 47	- 93	- 66	-202	- 36	- 42						
MEANS 10 DAYS		- 78	- 42	- 79	- 86	- 80	- 78	- 80	- 68	- 35	- 61	- 50	- 25	- 41	-111	- 17	- 2	- 13	+ 73	+146	+ 30	- 78	- 78	- 62	- 40	- 40						

* = 10 LEAST DISTURBED DAYS

TABLE 61

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE	OM	LENGTH IN KMS 56.8										DIRECTION N 19° 5' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-543	-547	+146	+64	-100	-87	-68	+287	+100	-538	-192	-296	-447	-319	-91	-442	+219	+1231	-410	+547	-410	-648	-55	-46	-110								
2		-114	-36	-374	-319	-296	+64	+91	+420	+91	-360	-502	-146	-233	-524	-274	+447	+23	-55	-137	-173	-228	-365	0	-173	-132								
3		-137	-237	-182	-228	-91	-82	+365	+237	-9	-269	-137	-374	-538	-91	-237	-46	+319	-255	-192	+137	-228	-164	-410	-169	-126								
4		-46	-593	+205	+100	+23	-182	+9	+128	-32	-219	-492	-584	-160	-342	-137	-68	+410	+46	+246	-228	-502	+410	-91	-182	-94								
5		-182	-205	-160	-105	-128	-128	-23	+461	-55	-68	-502	-707	-410	-228	+82	-46	+205	+205	0	-296	+205	-46	-274	-219	-109								
6		-456	-23	-23	-100	-36	-23	0	+123	+192	+82	-388	-447	-447	-401	+27	-128	-46	-91	+105	+182	-182	-114	-55	-274	-105								
7		+242	-269	-775	-137	0	+91	+401	-620	+46	-182	-242	0	-356	-365	-46	+137	+401	+548	-296	-251	-23	-46	-91	-80									
8		-456	-137	-192	-23	-128	0	+91	+319	-114	-319	-260	+46	-160	-342	-237	-46	-114	-27	+201	-55	-27	-137	-456	-23	-108								
9		-64	-91	-219	-242	-160	+182	+36	+141	+182	-55	-205	-160	-447	-502	-388	-264	0	+9	+146	-91	-100	-91	-292	-274	-123								
10	X	+91	+23	-264	-365	-68	+46	+100	+192	-46	-264	-315	-223	-264	-105	-365	-182	-36	+9	-23	-123	-91	-128	-100	-46	-106								
11	X	-192	-255	-82	-87	-132	-96	+46	+123	0	-87	-278	-319	-237	-410	-264	-32	+137	0	-128	-128	-9	-46	-127	-14	-109								
12	X	-105	-228	-237	-155	-64	-100	+23	-9	-91	-228	-324	-237	-219	-228	-242	-132	-55	-9	-46	-91	-150	-150	-160	-82	-138								
13	X	-150	-242	-182	-237	-219	-137	+46	+68	+228	-365	-638	0	-46	+274	-137	+182	+46	+91	+319	0	+502	-547	-638	-547	-97								
14		+319	-319	+46	-68	-219	-150	+5	-128	-55	-164	-274	-169	-301	-173	-178	-32	-32	+228	+324	+287	-150	-661	-182	-570	-109								
15		+214	-105	-91	-274	-137	+155	+68	+150	-23	-274	-315	-278	-87	-55	-424	-182	-36	+46	-128	-23	0	-192	-87	-205	-95								
16	X	-146	-137	-169	-479	-46	+146	+274	+119	-59	-182	-283	-388	-301	-169	-160	-36	+287	+91	+82	-137	-228	-137	-146	-32	-92								
17		-91	-821	+46	+137	-64	-128	+91	+178	0	-228	-319	-410	-296	-274	+46	-46	-137	+319	+365	0	-91	+46	-410	-365	-102								
18		-228	+46	-410	-547	-46	+137	+46	+333	+274	-283	-128	-310	-524	-301	0	+91	+114	-46	-46	-251	-228	-182	-137	-146	-116								
19	X	-141	-137	-123	-91	-87	-14	+100	+296	0	-479	-775	-575	-274	-237	+23	+96	+173	+91	-46	-146	-91	-100	-219	-96	-119								
20	X	-251	+146	+23	-23	-23	-68	+100	+192	+73	-274	-520	-497	-374	-246	-196	0	+36	+46	-55	-128	-132	-137	-91	-128	-105								
21		-210	-82	-114	-23	-32	-87	+46	+378	+242	-169	-556	-534	-351	-310	-324	-237	-96	0	-46	-137	-146	-137	-269	-228	-143								
22		-274	-173	+23	+251	+91	-182	+173	+132	0	0	-182	-365	-264	-160	-219	-114	-137	-146	-91	+237	+150	-73	-274	-365	-82								
23	X	-365	0	-274	+91	-716	+479	+91	+196	-433	+182	+182	-82	-356	-255	+319	-511	-36	+100	+420	-246	-68	-137	-274	-68	-73								
24		0	-365	-730	+23	+274	-114	+46	+23	-46	-365	-365	-91	-228	-365	-182	+160	+228	+182	-91	-365	-228	-365	0	+137	-118								
25		-137	-228	+59	-23	-46	-91	-100	-23	-100	-205	-365	-410	-182	-274	+23	+274	0	+502	-365	-46	-137	-638	-46	+515	-85								
26		-456	-319	+137	-205	+105	+91	+46	-192	-251	-319	-182	-606	-410	-319	-91	0	+173	+260	+91	-356	-264	+319	-730	+219	-136								
27		-342	0	+68	-274	-55	0	+91	-23	-137	-502	-410	-160	-9	-137	-205	-91	-114	+46	+228	-23	+46	-415	+55	-593	-123								
28		+100	-319	-219	-55	0	0	+137	+201	-137	-137	-274	-182	-46	+137	-160	-228	-160	-91	+23	-228	-137	-137	-347	+123	-89								
29	X	+46	0	-205	-114	-78	-50	+150	+119	-146	-347	-401	-388	-547	-264	-137	+137	-23	0	-9	-119	+192	-87	-132	-296	-112								
30	X	-132	-169	-73	-68	+73	-82	0	+68	-46	-383	-752	-652	-401	-173	-14	+46	+132	+50	+141	-82	-182	-137	-287	-178	-138								
MEANS ALL DAYS		-140	-194	-145	-119	-80	-14	+83	+130	-12	-233	-346	-318	-297	-237	-140	-43	+63	+113	+19	-78	-98	-175	-211	-147	-109								
MEANS 10 DAYS		-134	-100	-159	-153	-136	+12	+93	+136	-52	-243	-410	-336	-302	-181	-117	-43	+66	+47	+66	-120	-26	-161	-218	-149	-109								

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD LINE ON LENGTH IN KMS 93.9 DIRECTION E 0° 5' N

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-401	-496	+104	+46	-6	-61	-80	+190	+349	-376	-67	-147	-245	-31	+184	-214	+367	+949	-184	+643	-306	-520	-15	+76	-10
2		-312	+55	-24	-294	-147	+110	+83	+196	+208	-177	-251	+275	+147	-575	-392	+187	+64	-83	-125	-269	-31	-208	+92	-55	-64
3		-113	-220	-129	-285	0	+9	+141	+245	-28	-199	+168	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5		-177	-144	-174	-159	-58	-135	-95	+428	+24	+150	-244	-514	-278	-86	+86	-86	-76	+31	-55	-260	-40	-55	+119	-230	-84
6		-165	0	-31	-61	-89	-83	-61	+31	+196	+422	-43	-211	-337	-190	+343	-254	-138	+245	+80	-413	+99	+31	-110	-741	-62
7		+419	-61	-805	-31	-181	+177	+165	-321	-101	-113	-132	+361	-217	-199	-147	-37	+480	+802	-364	-349	-171	-251	-346	-58	-62
8		-217	-177	-153	-55	-122	-92	-55	+330	+58	-395	-159	+392	+156	-260	-153	-110	-236	-141	+245	-343	+181	-125	-465	0	-79
9		+24	-110	-217	-184	-306	+153	-55	+80	+92	+98	+122	+193	-171	-545	-337	-272	+46	-28	-58	-52	-386	+119	-282	-211	-96
10	X	+61	+122	-187	-141	-92	-6	-92	+43	-61	-73	+9	+15	-52	+89	-263	-168	-61	-12	-67	-98	-67	-184	-92	-12	-58
11	X	-129	-184	-89	-58	-119	-122	-89	+18	0	-6	-92	-119	-31	-205	-80	+6	+275	-70	-147	-132	-285	+184	-144	-9	-68
12	X	-67	-214	-181	-153	-64	-89	-40	-58	-214	-116	-64	-21	0	-125	-193	-138	-92	-24	0	-58	-116	-116	-236	-18	-100
13	X	-132	-294	-278	-300	-349	-153	-49	+52	+444	+101	-520	-28	0	+728	+122	+153	+31	+61	-107	-61	+306	-184	-444	-56	-56
14		+327	-422	+61	+15	-181	-144	-129	-15	+31	-168	-43	0	-257	-86	-67	-40	-92	+230	-367	-184	-122	-490	-184	-474	-117
15		+184	-110	-92	-184	-217	+37	+31	+89	-6	-122	-122	-150	+153	+95	-398	-184	-15	0	-55	0	-40	-31	+31	-239	-56
16	X	-92	-101	-205	-275	-132	+67	+76	0	-15	-113	-70	-162	-162	-92	-101	-31	+337	+31	+113	-177	-177	-61	-122	-55	-63
17		-31	-300	-291	+220	-31	-92	-61	-9	+92	-61	-153	-211	-220	-199	+92	-92	-61	+441	+337	-153	-428	-184	-153	-230	-59
18		-153	+98	-159	-422	+122	+147	-24	+346	+398	-116	+214	-505	-539	-251	+86	+129	+21	-214	-55	-306	-220	-144	-119	-141	-75
19	X	-132	-153	-144	-132	-73	-89	-15	+269	+61	-260	-404	-254	-153	-116	+31	+37	+67	+40	-28	-110	-31	-55	-147	-83	-78
20	X	-349	+122	+80	-67	-37	-95	0	+159	+92	-92	-211	-251	-199	-116	-159	0	0	+28	-18	-70	-58	-86	-153	-76	-65
21		..	..	..	..	..	..	..	+278	+214	+55	-55	-177	-122	-92	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	+297	0	+31	0	-113	0	+92	-15	-15	0	-312	-116	+31	-46	+165	-135	-306	..
23	X	-337	+6	-496	+171	-208	+358	+147	+141	-343	+187	+410	+125	-147	-34	+389	-416	0	+282	+514	-444	+80	-107	-254	-340	-13
24		+86	+275	-373	-431	+404	-92	-119	+34	+98	-37	-95	+184	-211	-361	-70	+520	+373	-248	-193	-226	-340	-306	+116	+55	-40
25		-92	-190	-49	+116	-52	-43	+61	+46	-70	+61	+73	-73	-89	-306	+34	+337	+251	+144	-211	-306	-73	-404	-343	+453	-30
26		-205	-392	+31	-141	+86	+31	-73	-113	-162	-28	+428	-340	-465	-269	+12	-64	+245	+407	+86	-291	-159	+95	-269	+122	-60
27		-373	0	+147	-153	-113	0	+34	-52	-92	-254	-184	+52	+125	-101	-239	-67	+116	+153	-135	-9	+177	-364	+119	-425	-68
28		+147	-132	-150	-31	-15	-24	+122	+205	-153	-153	+24	-40	+147	+275	-31	-92	-205	-15	-107	-122	-214	+40	-340	+31	-35
29	X	+61	+116	-67	-67	-31	-70	+15	+61	-61	-92	-70	0	-358	-205	-76	0	-37	+31	+24	-43	-31	+177	-61	0	-33
30	X	-21	-116	-43	-40	+34	-92	-101	+40	+86	-67	-159	-352	-370	-214	-31	-15	+119	+76	+251	+24	-83	-107	-260	-150	-66
MEANS ALL DAYS		-80	-108	-146	-108	-76	-15	+16	+84	+37	-69	-69	-69	-145	-130	-52	-35	+68	+120	-24	-147	-98	-114	-156	-125	-61
MEANS 10 DAYS		-114	-70	-161	-106	-107	-29	+15	+72	-1	-53	-117	-105	-147	-29	-36	-57	+64	+44	+54	-117	-46	-54	-191	-119	-60

* = 10 LEAST DISTURBED DAYS

TABLE 63

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE OM		LENGTH IN KMS										56.8 DIRECTION N 19.5 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24									
1	X	-100	-274	-46	-46	0	-87	-9	+100	0	-310	-515	-424	-401	-264	-214	-137	+205	+483	-91	-36	-264	-242	-260	-237	-132								
2	X	-114	-146	0	-32	+55	+155	-23	+114	+46	-351	-547	-488	-789	-306	-114	+219	+383	+579	+228	+160	+155	+128	-283	-447	-59								
3		-775	-100	-219	-82	+274	+146	+146	+228	+55	-296	-483	-552	-319	-264	-160	-91	-260	+319	-214	-160	-137	-55	-246	-210	-144								
4		-264	-59	+128	+46	-119	-46	+196	+260	0	-356	-100	-515	-479	-328	-155	-169	+105	+196	+169	-356	-137	-100	-251	+96	-93								
5		-55	-251	-182	-41	-91	+123	+219	+14	-87	-816	-442	-242	-233	-100	+137	0	-128	-128	-82	+78	+497	+78	+46	-524	-92								
6		-488	-351	-251	-192	+237	+127	+141	+123	-388	-356	-401	-137	-128	-146	-246	-141	+78	-64	+23	+23	-100	-132	-128	-237	-131								
7		-128	-319	-59	-23	0	+46	+132	+91	-36	-351	-420	-374	-228	-160	-137	-59	-68	0	-91	-36	-91	-182	-137	-128	-115								
8	X	-123	-137	-82	-96	-91	+32	+68	+78	-68	-315	-365	-328	-228	-82	-46	-82	-137	-128	-182	-50	-78	-96	-132	-137	-117								
9	X	-146	-64	-96	-46	-36	0	+23	+73	+23	-55	-319	-319	-228	-242	-141	-164	-205	-237	-137	-119	-178	-5	-96	-36	-113								
10	X	-14	-36	-50	-78	-137	-87	+46	+269	+178	-46	-319	-451	-264	-401	-264	+23	+41	+192	-214	+36	-91	-388	-333	-128	-105								
11	X	-315	0	-59	-237	+91	-192	+219	-55	-150	+68	-18	-123	-91	-251	-105	-36	-36	-46	-64	-87	-78	-146	-100	-137	-82								
12	X	-269	-182	-219	-59	-46	+32	+27	+114	0	-214	-255	-196	-164	-46	-78	-219	-182	-223	-132	+27	+401	+68	+91	-173	-79								
13		-255	-210	-333	-46	+36	+82	-46	+23	-132	-182	-73	-87	-187	-228	-164	-173	-78	+91	-27	+406	-192	-178	-82	-36	-86								
14		-132	+91	+50	-141	-219	-18	0	+59	-78	-356	-219	-274	-178	-55	+46	-36	+64	+192	+46	-96	-169	-479	-141	-18	-91								
15		-360	-287	+137	-73	0	-237	+87	+287	+46	-78	-146	-283	-237	-150	-23	-123	-132	-96	-46	-246	+365	+78	+223	-1003	-96								
16		+775	-36	-378	-483	+146	+50	+105	+150	-182	-506	-333	-337	-201	+55	+141	+59	+114	0	-128	-260	-210	+78	-283	+132	-64								
17	X	-128	-182	-123	+82	-36	0	+251	+196	-96	-374	-534	-315	-150	-55	-64	-64	-46	-55	-87	-132	+73	-182	-237	-155	-101								
18	X	-132	-73	-23	-137	-55	-178	+219	+306	+228	-178	-502	-588	-451	-306	-114	0	0	+18	-9	-50	-150	-137	-109	-205	-109								
19		-46	-132	-82	-46	+27	-46	+132	+292	+137	-287	-648	-584	-502	-319	-46	+23	+155	+160	0	-82	-91	-128	-91	-146	-98								
20		-114	-137	-87	-46	-23	+14	+100	+274	+187	-36	-315	-616	-684	-438	-260	-109	0	0	+14	-150	0	-36	-219	-333	-126								
21		-223	+46	+274	-68	+68	+182	+96	+251	+137	0	-201	-365	-515	-629	-410	-55	-41	+160	+196	-169	-41	-128	+27	+219	-50								
22		+46	-128	-164	-114	-378	-50	-73	+223	-146	-68	-310	-465	-365	-347	-214	+36	+91	+68	-9	-119	-132	-119	-100	-137	-124								
23	X	-223	-187	-114	-150	-82	+46	+59	-23	+114	-274	-511	-502	-461	-182	-114	+438	-68	+91	+18	-27	+511	-59	-137	-46	-78								
24		-228	-310	-223	-438	+237	+251	0	-23	-68	-160	-324	-406	-524	-378	-223	-155	-41	+638	+328	-264	-219	+556	+46	+173	-74								
25		-593	-374	+132	-123	-59	0	+18	+123	+105	-128	-456	-561	-406	-301	-91	+146	+155	+160	-55	-128	-164	-87	-32	-141	-118								
26		-588	+192	-46	-36	+46	-109	-59	+73	-91	-365	-456	-497	-160	-109	-109	+128	+114	+137	-82	-119	+109	-23	-55	-196	-96								
27		-23	-91	-46	-132	-96	-73	+205	+264	+137	0	-633	-739	-492	-319	-119	+160	+23	-155	+132	-228	+424	-169	-433	-196	-108								
28		-164	+23	-182	-36	+46	+55	+91	+78	-59	-100	-178	-228	-333	-68	-456	+50	-141	-73	-87	0	+64	+219	-46	-406	-80								
29		-182	-50	-132	-32	-178	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30		-117	-812	-442	-132	+109	+128	+214	+68	-237	-456	-506	-433	-451	-401	-14	-178	-123	-114	-100	-59	0	-146	-196	+32	-224								
31		-96	-82	-91	+46	0	0	+141	+237	-41	-488	-762	-497	-214	-237	-50	+55	+119	+36	-96	-141	-173	-182	-132	-114	-120								
MEANS ALL DAYS		-213	-153	-96	-99	-3	+12	+91	+142	-16	-248	-376	-398	-335	-235	-127	-25	-6	+73	-26	-79	-3	-73	-128	-162	-104								
MEANS 10 DAYS		-156	-128	-81	-80	-34	-28	+88	+117	+28	-205	-388	-373	-323	-214	-125	-2	-4	+67	-67	-28	+30	-106	-160	-170	-98								

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	- 93	-198	- 34	-102	+ 12	-148	-133	+ 59	+ 62	- 12	-133	- 87	-185	-148	-284	-272	+371	+633	- 15	+ 93	-377	-250	-232	-247	- 72						
2	X	- 56	-198	- 87	- 87	- 31	+ 96	+ 19	+ 12	+ 53	- 25	- 56	+ 46	-448	+ 25	+170	+349	+470	+117	+ 37	+405	+154	+ 9	-229	-374	+ 15						
3		-553	-124	-219	0	+145	+ 77	+ 9	+136	+ 71	- 19	- 68	-207	-158	- 22	- 62	-185	-281	+161	-154	- 65	- 83	- 71	-253	- 68	- 83						
4		-331	+ 15	+204	- 15	-117	- 40	0	+151	+ 43	- 40	+389	-192	-226	-117	0	- 71	+142	+278	-457	-179	- 83	- 93	-303	- 31	- 45						
5		+ 22	- 56	-170	- 59	- 87	+ 34	+ 93	+ 9	+ 99	-309	-256	-179	-102	+173	+399	+247	-266	-154	-176	+ 80	+ 77	+ 43	+ 87	-331	- 33						
6		-195	-263	-164	- 68	+154	+ 40	+161	+ 25	-247	-179	-201	+114	+216	+ 68	-207	- 83	- 31	- 40	+ 59	-124	-232	+ 49	+ 74	-151	- 51						
7		- 62	-204	- 62	- 31	- 22	+ 15	+ 22	+ 40	- 31	-148	-164	-154	- 49	0	+ 46	+ 62	- 43	-124	- 53	+ 15	- 37	-117	- 71	- 77	- 52						
8	X	- 83	- 87	- 68	- 93	- 93	- 56	- 40	0	- 62	-161	-121	- 49	+ 43	+ 62	+ 62	0	- 71	-130	-216	- 77	- 25	- 31	- 77	- 93	- 61						
9	X	-124	- 31	-136	- 31	- 37	- 53	0	0	+ 15	+ 6	0	- 31	- 68	- 93	- 49	-130	-185	-222	-114	- 46	-108	+ 31	+ 74	+ 15	- 61						
10	X	- 31	0	- 28	- 6	-130	-176	- 31	+167	+145	+ 53	-130	-127	+ 43	-142	- 77	+198	+210	+371	-284	- 28	- 62	-494	-253	-139	- 40						
11	X	-294	- 77	- 56	-179	+ 87	-130	+ 77	- 43	-108	+ 87	+ 12	+176	+154	+117	0	0	- 37	+ 22	- 56	-136	-198	- 49	-108	-148	- 37						
12	X	- 83	-121	- 96	+ 31	- 9	- 22	+ 31	+ 46	- 25	-133	- 62	+ 96	+ 93	+182	+ 31	-142	-207	-219	- 93	+108	+170	+195	-445	- 34	- 29						
13		- 87	-154	-222	- 90	- 74	- 83	-188	- 56	- 90	- 71	+ 74	+ 96	+ 34	- 99	- 46	- 31	0	+148	+ 80	+315	- 99	-309	-179	+127	- 42						
14		-198	+ 56	+ 77	- 74	-121	- 71	- 40	+154	+117	- 68	- 37	-133	- 12	+127	+185	+210	- 31	+142	-188	- 15	+ 31	-343	- 56	- 9	- 12						
15		-253	-182	+ 68	+182	+ 28	-216	+ 37	+216	+ 49	+ 74	+ 37	0	- 22	-222	- 12	-133	-170	- 34	+ 25	-151	+148	-417	+473	-494	- 40						
16		+593	+ 71	-188	-396	+ 90	0	+ 65	+ 77	- 93	-454	-213	- 93	+ 46	+210	+192	+ 93	+204	0	-188	-272	-148	-148	-201	+124	- 27						
17	X	- 25	-272	-154	+173	0	- 31	+158	+167	- 31	-188	-207	- 56	-111	- 31	- 87	- 87	- 37	- 37	- 46	- 93	+ 87	- 62	-151	-117	- 52						
18	X	-111	- 56	- 46	-170	- 46	-145	+ 43	+188	+278	+59	-192	-309	-219	-139	- 62	- 25	- 62	- 74	- 59	- 22	-142	-130	- 62	-216	- 72						
19		- 22	- 80	+ 9	- 90	- 22	- 77	+ 65	+192	+105	- 77	-303	-272	..	..	..	..	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	+ 40	+117	+ 87	+ 31	+ 37	-185	-253	-185	-114	-105	- 83	- 96	- 49	-139	+105	- 96	-121	-309	..
21		-213	- 62	+ 25	+148	+139	+188	+ 71	+179	+127	+185	+ 99	- 53	-309	-337	- 99	+ 46	- 96	+124	+ 90	- 31	- 74	-130	+ 53	+170	+ 10						
22		+ 68	-139	-117	- 62	-346	- 74	+ 53	+179	-154	- 59	-222	-247	- 71	-108	+ 6	+ 87	+ 77	- 15	- 9	- 74	- 83	- 65	- 68	- 93	- 64						
23		-192	-192	-127	-114	-108	- 99	- 40	- 53	+124	0	-210	-113	-201	+ 62	+ 83	+448	-278	+ 53	- 31	+ 37	+355	+108	- 87	+ 18	- 24						
24	X	-176	-287	-232	-210	+ 31	+121	- 93	- 65	- 62	- 22	- 22	-139	-303	-210	-133	-124	+148	+695	+392	-272	-219	+368	-362	+448	- 30						
25		-256	-337	+161	- 71	- 65	- 87	- 62	+142	+ 49	- 25	-278	-334	-195	-158	+111	+222	+201	+207	- 31	-247	-195	- 62	0	-142	- 60						
26		-525	+204	- 22	- 59	- 25	- 46	-148	- 80	-127	-179	- 93	-142	+ 37	- 56	- 37	+154	+ 71	+216	- 59	-136	+127	0	+ 31	-222	- 46						
27		+ 56	- 15	- 28	- 93	- 90	-179	+ 56	+145	+158	+ 96	-392	-479	-340	-176	+ 62	+253	+ 93	- 65	+ 46	-195	+207	- 56	-253	-138	- 57						
28		-114	+ 62	-102	- 65	0	0	+ 77	+ 56	+ 31	- 9	+ 62	+105	+ 37	+130	-541	+ 19	..	..	..	..	+154	+179	+ 53	-414	..		
29		-170	-130	- 68	+ 28	-151	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30		-618	-541	-241	-161	+124	-102	+154	+ 43	-256	-414	-232	- 83	-340	-269	+124	- 49	- 77	+ 62	- 83	- 34	+121	-216	-170	- 40	-137						
31		-176	-229	+ 12	+ 59	- 31	- 80	+ 31	+229	0	-392	-535	-182	0	-158	+ 37	+ 62	+479	+ 90	- 34	- 62	- 80	-167	- 83	- 83	- 52						
MEANS ALL DAYS		-148	-129	- 72	- 69	- 23	- 47	+ 11	+ 77	+ 4	- 87	-119	-107	-100	- 54	+ 13	+ 41	+ 22	+ 82	- 60	- 45	- 28	- 87	-111	- 89	- 46						
MEANS 10 DAYS		-109	-123	- 83	- 58	- 36	- 76	+ 8	+ 54	+ 45	- 31	-110	- 47	- 90	- 10	- 21	+ 34	+ 17	+ 51	- 88	+ 24	- 15	- 67	-172	-134	- 43						

* = 10 LEAST DISTURBED DAYS

= 10 LEAST DISTURBED DAYS

TABLE 65

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1932
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
JUNE 1932
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
COMPONENT NORTHERLY LINE OM LENGTH IN KMS 56.8 DIRECTION N 19°.5 E

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-182	-32	-14	9	-141	+77	+223	+273	-50	-328	-637	-578	-323	-273	-286	+46	0	-50	-86	-50	+168	+55	-309	-82	-107
2		-250	-105	-127	-46	+32	+46	+177	+223	+46	-187	-419	-400	-669	-478	-100	+32	+9	+96	-100	-237	-214	-127	0	-132	-122
3		-164	-55	-96	-18	0	+77	+187	+155	-9	-359	-455	-410	-341	-268	-187	+14	-46	0	-46	-137	-177	-100	-173	-137	-114
4	X	-68	-96	-105	-91	-55	-14	+141	+519	+132	-273	-382	-391	-410	-355	-187	0	+228	+164	+96	0	-14	-50	-55	-132	-58
5	X	-137	-55	-23	-141	-114	+46	+46	+123	+137	-123	-309	-323	-410	-232	-364	-137	-46	+46	+50	-59	-91	-91	-77	+14	-95
6	X	-36	-177	-91	-86	+91	+55	+141	+73	-96	-473	-364	-546	-268	-146	-132	+68	+223	+50	-55	-91	-323	-223	-127	-127	-111
7		-137	+77	-364	+100	+218	+141	+14	+123	0	-50	-46	-328	-546	-341	-241	0	+132	+318	+14	+77	-282	+41	-137	-23	-50
8		-127	-500	-91	-96	-86	-82	-218	+341	-59	+159	-264	-264	-228	-182	+105	-177	+218	+328	+36	+300	-82	-369	-36	-173	-64
9		-318	-369	+46	-23	-127	-23	-55	+173	+273	+46	-123	-318	-496	-369	-273	-46	+96	+359	+314	-187	+173	-350	-55	+137	-63
10		-764	+86	+46	-341	-68	+187	+159	+150	-36	-218	-359	-246	-250	-241	+64	-127	+23	+150	+46	-137	-86	-91	-255	-132	-102
11		-96	-127	-141	-250	+77	-187	+146	+132	+46	+137	-173	-341	-369	-337	-191	-41	-46	+132	0	-250	-141	-205	-132	-100	-102
12		0	-273	-41	-91	-146	-23	-50	+228	-114	-127	-359	-328	-141	-123	-109	-182	-141	-50	+77	-41	0	0	-82	-150	-94
13		-146	-32	-73	-359	-50	+73	+155	+291	-64	-410	-500	-587	-464	-241	+77	+96	+223	+91	-96	-123	-187	-177	-91	-91	-120
14	X	-137	-41	+46	0	0	0	+46	+82	-232	-541	-469	-273	-82	-46	-14	9	-50	-91	-73	-164	-137	-123	-127	-55	-103
15	X	-109	-86	-137	0	+46	+18	+132	+182	-168	-528	-764	-637	-268	-55	+77	+187	+218	+59	-187	-118	-105	-132	-114	-64	-106
16	X	-141	-82	-41	-36	-27	+77	+223	+214	-46	-373	-592	-737	-505	-228	+196	+109	+141	0	-82	-96	-118	-91	-187	-168	-108
17		-137	-123	-96	+82	+305	+23	+46	+77	-50	-423	-869	-733	-400	9	+187	+137	+86	-105	-205	-218	-46	-168	+46	+46	-105
18		-82	-14	-14	+123	+41	+82	+273	+91	-232	-437	-592	-582	-314	-196	-137	+77	+127	+91	-23	-91	-91	-164	-187	-177	-101
19	X	-141	-118	-50	+18	-91	+137	+159	+91	+91	-286	-587	-660	-423	-560	-59	-41	+50	+68	+73	+91	-218	-177	-132	-100	-119
20		-137	-146	-64	-273	+196	+123	+496	+14	-146	0	-250	-328	-386	-282	-127	-46	-36	+118	-55	-273	-173	-150	-159	-205	-95
21		-123	-214	-196	+50	+50	+36	+86	+200	+105	-282	-432	-323	-341	-241	-46	0	-182	-132	-59	-86	-23	+91	-137	+400	-75
22		-77	-187	-173	-137	-369	+9	+50	-96	-173	-264	-419	-250	-191	-73	-46	-141	-114	+218	-55	+36	+59	-241	-36	-182	-118
23	X	-36	-59	-127	-86	-41	-187	+132	-14	-173	-323	-364	-328	-305	-273	-264	-123	-18	+59	+50	0	-187	-137	-118	-137	-127
24	X	-137	-141	-77	-36	-46	-18	+59	+118	+32	-273	-592	-546	-487	-86	-177	+9	+46	+46	-55	-127	-86	-105	-86	-132	-121
25	X	-137	-141	-59	-132	-82	-86	+82	+109	+86	+46	-564	-737	-546	-369	-191	-27	+127	+205	0	-150	-159	-86	+59	-137	-120
26		-291	+278	-532	+68	+182	-73	+182	-73	-268	-359	-369	-441	-391	-73	-55	+141	+68	-18	-91	-146	-123	-182	-96	-86	-114
27		-132	-82	-86	-64	-91	0	+159	+77	-177	-614	-714	-673	-369	-164	+159	+218	+86	-18	-91	-118	-141	-123	-59	-18	-127
28		-23	-50	-46	-46	-50	-137	+46	+205	+59	-237	-541	-664	-500	-177	-46	+50	+109	0	-159	-232	-164	-114	-96	-86	-121
29		-205	-23	-14	-96	-41	0	+177	+237	-182	-637	-874	-814	-405	-50	+232	+405	+323	+191	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	..	..	-218	-673	-710	-614	-400	-46	+73	+273	+132	-100	-155	-82	-123	-82	-118	..
MEANS ALL DAYS		-152	-102	-97	-68	-12	+13	+116	+146	-39	-254	-447	-463	-372	-224	-85	+4	+55	+76	-27	-94	-106	-128	-106	-80	-102
MEANS 10 DAYS		-108	-100	-66	-59	-32	+3	+116	+150	-24	-315	-499	-518	-370	-235	-112	+5	+92	+61	-18	-71	-144	-122	-96	-104	-107

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-185	-22	+28	-25	-136	+15	+77	+160	+166	-31	-305	-216	-117	-160	-160	+43	+22	+99	+246	-6	-92	-68	-296	-154	-120	-213	-416	+15	-52		
2		-151	-65	-132	-74	+25	0	+105	+108	+65	-15	+99	-102	-403	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3		..	..	..	..	..	..	..	+95	+117	-74	-120	-102	-117	-77	-126	0	-142	-55	-12	-62	-89	-65	-55	-83	..	..	..	..	..
4	X	-40	-86	-95	-74	-83	-59	+18	+191	+95	-123	-172	-59	-95	-136	-108	-62	-31	-46	+34	+40	+25	-12	-25	-172	-45	..	..	..	..
5	X	-99	-65	-43	-154	-99	-86	-142	-49	+59	-31	-31	+31	-56	+9	-197	-31	-31	0	+52	-12	-49	-65	-31	+6	-46	..	..	..	..
6	X	-31	-92	-62	-86	+28	+6	+43	-68	-314	-89	-203	0	+43	+22	+99	+246	-6	-92	-68	-296	-154	-120	-213	-59	..	..	..	..	..
7		-206	+139	-145	-34	+99	0	-86	-92	+52	+89	+317	+179	-213	-139	-80	+148	+166	+320	-154	+191	-274	-34	-105	-46	+4	..	..	..	..
8		-28	-345	-49	-86	-92	-194	-154	+83	-77	+222	-111	+37	+123	+179	+416	-225	+256	+265	+71	-216	-172	-185	0	-129	-17	..	..	..	..
9		-197	-172	+34	-34	-176	-74	+34	-62	+169	+111	+148	+74	-176	-163	-249	-49	+59	+354	+277	-129	+74	-493	+163	+219	-11	..	..	..	..
10		-585	+99	+89	-126	-139	-15	+83	-6	+86	+62	-59	-46	-55	-68	+194	-83	+12	+169	-179	-219	-43	+18	-123	-80	-42	..	..	..	..
11		-102	-111	-375	+330	+126	-40	+25	+25	+62	+299	-114	-92	-154	-191	-89	+65	0	+142	-55	-271	-59	-99	-68	-55	-33	..	..	..	..
12		-92	-176	+6	-117	-126	-68	-114	+145	-62	-43	-169	-108	+111	+154	-18	-55	-71	-55	+71	+22	+62	+52	-197	-62	-38	..	..	..	..
13		-77	-9	-68	-135	-83	-28	+163	+267	-71	-262	-185	-213	-240	-197	+89	+148	+219	+102	-95	-92	-160	-123	-74	-62	-51	..	..	..	..
14	X	-179	-15	+89	-6	-15	-15	+25	+62	-142	-382	-274	-31	+139	+43	+18	-22	-86	-62	-22	-74	-68	-59	-92	0	-49	..	..	..	..
15	X	-95	-55	-151	0	+43	-28	+40	+148	+12	-160	-314	-339	-163	-92	+62	+240	+283	+31	-163	-62	-55	-68	-35	-31	-41	..	..	..	..
16	X	-154	-62	+12	-9	-34	-15	+68	+188	+123	-148	-425	-499	-280	-86	+308	+213	+228	+34	-31	-65	-9	-40	-123	-92	-37	..	..	..	..
17		-95	-71	-71	+15	+151	-77	-59	+71	+105	-182	-480	-425	-246	+89	+253	+216	+151	-65	-123	-114	+31	-95	+126	+59	-35	..	..	..	..
18		-34	+59	-28	+62	0	0	+126	+136	-40	-117	-206	-280	-160	-71	-105	+68	+99	+92	+25	-34	0	-92	-117	-123	-31	..	..	..	..
19	X	-120	-108	-62	-34	-123	0	-15	+157	+216	-25	-249	-259	-89	-333	+163	+139	-31	+62	0	-31	-28	-89	-62	-62	-41	..	..	..	..
20		-95	-132	-68	-179	+31	+34	+293	+145	+34	+299	+28	+62	-62	-160	+52	+31	-59	+40	-160	-213	-114	-129	-89	-169	-24	..	..	..	..
21		-80	-209	-222	+89	+65	-83	-59	+83	+185	-46	-145	-15	-129	-59	+213	+222	-114	-55	-62	-89	-148	+231	-462	+570	-13	..	..	..	..
22		+31	-160	-86	-55	-185	-68	-22	-145	-256	-249	-240	+83	0	+117	+166	-31	+31	+176	-34	+129	+102	-123	-15	-274	-46	..	..	..	..
23	X	+92	+68	-28	+31	0	-65	+55	-111	-213	-243	-120	-31	-37	-62	-145	-59	0	+95	+108	0	-83	-77	-49	-102	-41	..	..	..	..
24	X	-99	-92	-28	-9	-31	-31	-31	+71	+6	-154	-253	-157	-179	+89	-185	-65	+108	+99	-37	-31	-49	-55	-52	-95	-52	..	..	..	..
25	X	-99	-92	-55	-105	-108	-92	0	-55	+28	+172	-102	-336	-336	-246	-74	+31	+111	+271	+65	-92	-89	-18	+123	-111	-50	..	..	..	..
26		-216	+179	-437	-15	+200	-105	+117	-52	-253	-191	-182	-145	-105	+95	+37	+246	+111	+68	-59	-172	-37	-126	-62	-92	-50	..	..	..	..
27		-92	-55	-28	-15	-31	+31	+120	+111	-65	..	..	..	..	..	..	..	..	+9	-52	-62	-99	-74	-28	+6	..	..	..	..	..
28		-9	-52	-62	-65	-31	-213	-123	+102	+157	-25	-200	-339	-290	-31	+77	+151	+68	-15	-120	-123	-65	-37	-28	-80	-56	..	..	..	..
29		-182	+65	+49	-95	+6	-65	+65	+169	-28	-333	-517	-524	-206	+9	+246	+410	+253	+68	..	..	..	..	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		-112	-63	-75	-35	-29	-52	+13	+61	+15	-59	-157	-133	-112	-55	+28	+55	+66	+77	-31	-71	-53	-70	-79	-47	-38	
MEANS 10 DAYS		-82	-60	-42	-45	-42	-38	+1	+64	+12	-141	-203	-188	-110	-77	-14	+48	+80	+48	-9	-40	-70	-64	-50	-87	-46	

* = 10 LEAST DISTURBED DAYS

TABLE 67

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LINE OM		LENGTH IN KMS										56.8 DIRECTION N 19° 5' E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		-182	-136	-109	+95	+54	+114	+222	+263	-41	-268	-590	-554	-495	-64	-73	..	..	..	..	..	..	..	..	..	..
2	X	..	..	..	..	..	..	..	..	..	..	-867	-881	-740	-409	-95	+232	+318	+218	..	..	..	..	..	..	..
3		-150	-86	-23	+54	+82	+86	+236	+254	+18	-404	-681	-604	-400	-227	-82	+23	+168	+36	-50	-173	-141	+14	+18	+23	-84					
4		-64	-136	-182	-136	-59	-23	+227	+749	-45	-672	-690	-708	-613	-454	-404	+114	+204	-50	+82	+82	-36	-136	-45	-259	-136					
5		-73	-68	-86	-91	+50	0	+36	+73	-45	-173	-227	-309	-100	-45	+45	+409	-127	+182	-168	+45	+145	+304	-386	-522	-47					
6		+150	-817	-150	+136	+64	+41	+14	-227	+59	-340	-427	-345	-436	-213	-18	+104	+422	+68	-91	+191	+132	-118	-132	+114	-76					
7		+218	-295	-191	-232	+150	+104	+245	+186	+132	-136	-531	-658	-454	-218	-45	+64	+182	+245	+23	-145	-254	-50	-281	-45	-83					
8		-259	-41	-400	+222	-14	+54	+9	+236	+263	+195	-327	-508	-499	-309	0	-150	+36	+45	-100	-232	-136	+186	+45	-54	-72					
9		-68	-227	-363	+136	+50	+64	+114	+304	+54	-27	-95	-227	-268	-227	-36	-123	-182	+41	+100	+114	-163	-136	-213	+50	-55					
10		-109	-236	-277	-23	+191	+32	+136	+232	+114	-418	-454	-377	-227	-68	-45	-145	-114	-82	-50	-9	-109	+59	-41	-59	-87					
11		-91	-82	-95	-59	-64	-50	+218	+191	-50	-291	-463	-436	-327	-95	-68	+32	+177	+91	-145	-86	+91	-54	+50	0	-67					
12	X	-200	-200	-454	+177	+68	-50	+241	+154	-27	-141	-309	-363	-259	-186	-272	-186	-64	-41	+23	-50	+59	-132	-36	-55	-96					
13	X	-173	-100	-50	-32	-45	-18	+91	+145	+91	-254	-504	-636	-468	-136	0	+59	+23	-50	-118	-77	-141	-182	-136	-104	-117					
14	X	-91	-32	-82	+14	-54	-18	+163	+163	-86	-336	-481	-445	-222	-59	+14	+36	+9	-95	-213	-186	-168	-91	-91	-50	-103					
15	X	-95	-9	-9	-45	-45	+14	+18	+163	+182	-195	-386	-440	-418	-218	+9	+136	+50	-68	-259	-309	-141	+68	+554	+45	-58					
16		-318	+663	+263	-145	+114	-23	0	+254	+159	-304	-586	-640	-440	+36	+281	+45	+127	+291	0	-45	-136	-191	0	-222	-34					
17		-132	-150	+91	+54	+9	+36	+82	+281	+45	-277	-400	-486	-545	-309	-50	+141	+141	+118	+14	-186	-100	-173	-159	-100	-86					
18		-45	-95	-50	-9	-27	+127	+168	+277	+68	-177	-554	-808	-572	-291	+18	+109	+186	+127	+9	+14	+14	-50	-91	-222	-79					
19	X	-68	-109	-50	-82	-9	+36	+159	+277	+171	-210	-513	-631	-636	-543	+49	+200	+59	-54	+44	-39	-142	-127	-88	-98	-100					
20	X	-240	-137	-54	-54	-39	+49	+284	+440	+244	-205	-685	-768	-582	-274	-44	-10	+147	+122	-49	-147	-152	-196	-147	-196	-111					
21		-191	-147	-93	-39	-98	+83	+269	+479	+156	-445	-807	-773	-621	-196	+147	+54	+142	+181	-15	-103	-152	-186	-59	+34	-99					
22		-200	-103	-88	-117	-98	-10	+108	+171	+186	+15	-401	-435	-597	-244	-156	-59	+54	+24	-24	+10	+54	-98	+54	-220	-91					
23		-10	-205	-362	-196	-127	+15	+59	+235	+49	-205	-734	-743	-240	-142	-161	-88	+108	+152	+122	+24	-117	-54	-15	+24	-109					
24	X	-122	-156	-137	-44	-98	-59	+64	+142	+196	-132	-577	-489	-460	-318	-59	-39	-39	-108	-93	-122	-147	-112	-20	-93	-126					
25	X	-44	-15	-49	-54	+15	+39	+93	+289	+98	-235	-489	-474	-396	-440	-44	-49	+93	+147	+103	+112	+132	-137	-49	-49	-59					
26		-108	-122	-39	-132	-98	+78	+98	+244	+279	-230	-465	-592	-582	-460	-24	+284	+377	+73	-78	-93	-15	-59	-156	0	-76					
27		-49	+220	-78	-49	-93	-49	+210	+269	+156	-181	-430	-381	-298	-196	0	+49	+24	+142	+181	+39	+147	+171	+24	-93	-11					
28	X	0	-10	-88	-39	-24	-49	+117	+142	+49	-289	-499	-391	-88	-15	+230	+83	-68	-152	-98	-147	-132	-132	-93	-49	-73					
29		-93	-93	-112	-54	+10	+24	+147	+196	0	-254	-152	-112	-293	-303	-235	-68	+93	+98	-98	-142	-39	-142	-122	-98	-76					
30		-103	-152	0	-49	-49	0	+210	+259	-103	-504	-479	-499	-406	-78	-112	+147	+318	+68	-49	-15	-44	-112	-39	+108	-70					
31		-288	+200	-220	+98	-34	+34	+59	+244	+64	-411	-489	-474	-381	-342	-73	-88	-108	+93	+210	-102	-328	-205	-186	-132	-119					
MEANS ALL DAYS		-104	-94	-118	-27	-9	+20	+134	+235	+85	-250	-477	-509	-407	-227	-39	+35	+84	+57	-27	-62	-70	-71	-63	-80	-83					
MEANS 10 DAYS		-118	-85	-100	-11	-15	+3	+147	+217	+94	-240	-512	-524	-391	-242	-20	+18	+38	-26	-71	-114	-97	-103	-9	-63	-93					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LINE	OW	LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN		
		EASTWARD					WESTWARD							8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14																	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
1	
2	
3	X	- 81	- 81	- 20	+ 49	+ 29	- 26	+ 70	+ 70	+ 32	- 102	- 258	- 194	- 81	- 67	- 55	- 35	+ 38	- 12	- 32	- 90	+ 104	+ 87	0	+ 116	- 31	..	..	..	..	..	..	..	..	..
4		+ 17	- 145	- 258	- 226	- 116	- 107	+ 55	+ 583	+ 70	- 528	- 319	- 290	- 139	- 130	- 229	+ 165	+ 246	- 52	- 44	+ 128	- 87	- 110	+ 14	- 241	- 73	..	..	..	..	..	..	..	..	..
5		- 58	- 84	- 116	- 145	+ 9	- 139	- 96	+ 44	- 145	- 93	- 119	+ 168	+ 420	+ 116	+ 130	+ 551	- 188	+ 255	- 241	+ 81	+ 194	+ 328	- 478	+ 362	+ 32	..	..	..	..	..	..	..	..	..
6		+ 116	- 160	- 252	0	+ 139	+ 29	+ 113	+ 20	- 99	- 342	- 136	- 64	- 58	- 26	+ 84	+ 186	+ 104	- 61	- 186	+ 151	+ 38	- 81	- 110	- 508	- 46	..	..	..	..	..	..	..	..	..
7		+ 209	- 110	- 72	- 52	+ 14	+ 29	+ 92	+ 145	+ 116	- 78	- 325	- 478	- 270	- 93	+ 49	+ 160	+ 174	+ 139	- 64	- 119	- 249	- 139	- 345	- 81	- 56	..	..	..	..	..	..	..	..	..
8		- 183	- 145	- 342	+ 107	+ 29	+ 9	- 70	+ 67	+ 52	+ 267	- 151	- 307	- 348	- 41	- 29	- 64	+ 107	- 55	- 238	- 168	- 116	0	- 93	- 78	- 75	..	..	..	..	..	..	..	..	..
9		- 87	- 154	- 151	+ 64	+ 23	+ 29	- 113	+ 130	+ 20	- 23	+ 130	+ 26	- 67	- 87	+ 162	- 32	- 226	- 145	- 119	+ 99	- 119	- 348	- 357	+ 17	- 57	..	..	..	..	..	..	..	..	..
10		- 67	- 209	- 325	- 84	+ 41	- 84	- 52	+ 6	+ 12	- 299	- 270	- 209	- 58	0	+ 32	- 168	- 145	- 128	- 177	- 61	- 130	- 46	- 81	- 81	- 108	..	..	..	..	..	..	..	..	..
11		- 168	- 81	- 145	- 145	- 78	- 38	+ 32	+ 168	- 61	- 238	- 252	- 267	- 235	- 64	+ 23	+ 49	+ 160	+ 87	- 81	- 84	+ 35	- 122	- 14	+ 90	- 60	..	..	..	..	..	..	..	..	..
12	X	- 139	- 180	- 339	+ 55	- 64	- 90	+ 20	+ 9	- 102	- 151	- 139	- 81	+ 87	- 44	- 261	+ 14	+ 116	+ 81	- 49	- 32	+ 110	- 136	+ 38	- 64	- 56	..	..	..	..	..	..	..	..	..
13	X	- 104	- 81	- 58	- 44	- 26	- 29	- 38	+ 87	+ 67	- 157	- 325	- 386	- 229	- 9	+ 93	+ 116	+ 35	- 52	- 113	- 64	- 93	- 145	- 151	- 130	- 76	..	..	..	..	..	..	..	..	..
14	X	- 154	- 52	- 154	- 55	- 67	- 52	- 6	+ 6	- 90	- 235	- 304	- 197	- 49	+ 58	+ 145	+ 35	+ 81	- 122	- 258	- 235	- 200	- 130	- 180	- 145	- 98	..	..	..	..	..	..	..	..	..
15	X	- 246	- 81	- 23	- 58	- 55	- 35	- 61	+ 41	+ 87	- 26	- 142	- 226	- 354	- 319	- 58	+ 209	- 32	- 174	- 328	- 284	- 218	- 113	+ 75	- 29	- 102	..	..	..	..	..	..	..	..	..
16		- 302	+ 444	+ 160	- 290	- 46	+ 188	- 313	+ 130	+ 203	+ 67	- 180	- 278	- 255	+ 165	+ 302	- 52	+ 160	+ 194	+ 64	+ 55	- 261	- 406	+ 23	- 165	- 16
17		- 116	..	..	..	..	..	- 52	+ 17	- 67	- 142	- 116	- 151	- 246	- 136	- 29	+ 14	+ 70	+ 81	- 46	- 296	- 157	- 139	- 168	- 174	..	..	..	..	..	..	..	..	..	..
18		- 99	- 116	- 55	- 64	- 52	+ 46	+ 17	+ 58	+ 38	- 107	- 55	- 319	- 325	- 229	+ 23	+ 64	+ 142	+ 64	+ 9	- 29	+ 29	- 93	- 32	- 252	- 56	..	..	..	..	..	..	..	..	..
19	X	- 41	- 29	- 52	- 78	- 64	- 73	- 84	+ 96	+ 47	+ 30	- 160	- 212	- 355	- 352	+ 165	+ 88	- 30	- 69	+ 85	- 30	- 88	- 105	- 55	- 50	- 59	..	..	..	..	..	..	..	..	..
20	X	- 206	- 74	- 82	- 129	- 77	- 63	+ 52	+ 236	+ 223	- 11	- 332	- 578	- 377	- 179	+ 55	+ 28	+ 140	+ 28	- 58	- 82	- 162	- 198	- 110	- 157	- 88	..	..	..	..	..	..	..	..	..
21		- 165	- 173	- 96	- 110	- 140	- 50	- 22	+ 190	+ 63	- 226	- 385	- 336	- 399	+ 33	+ 242	- 58	+ 104	+ 116	- 55	- 69	- 192	- 206	- 50	- 85	- 86	..	..	..	..	..	..	..	..	..
22		- 190	- 104	- 126	- 138	- 214	- 66	- 55	- 96	+ 33	+ 58	- 138	- 36	- 302	- 69	- 77	- 82	+ 28	- 19	- 52	+ 25	- 14	- 124	- 82	- 157	- 83	..	..	..	..	..	..	..	..	..
23		- 19	- 170	- 214	- 113	- 77	+ 14	+ 41	+ 132	+ 19	- 118	- 440	- 446	- 143	- 80	- 96	- 41	+ 55	+ 132	+ 110	+ 14	- 77	- 52	- 19	+ 30	- 65	..	..	..	..	..	..	..	..	..
24	X	- 50	- 132	- 82	- 28	- 107	- 110	- 8	+ 22	+ 77	- 138	- 338	- 228	- 88	- 14	+ 44	+ 44	+ 25	- 38	- 63	- 88	- 104	- 55	+ 19	- 41	- 62	..	..	..	..	..	..	..	..	..
25	X	- 50	- 93	- 110	- 55	- 52	- 88	- 88	+ 85	- 58	- 264	- 250	- 140	- 165	- 245	+ 77	- 36	+ 50	+ 116	+ 69	+ 110	+ 360	- 132	- 179	+ 33	- 48	..	..	..	..	..	..	..	..	..
26		- 88	- 242	+ 82	- 69	- 60	- 19	+ 19	+ 58	+ 165	+ 14	- 107	- 242	- 308	- 308	- 28	+ 50	+ 110	0	- 110	- 88	- 25	- 30	- 190	- 28	- 60	..	..	..	..	..	..	..	..	..
27		- 157	- 187	- 8	- 55	- 77	- 102	+ 14	+ 52	+ 157	+ 28	- 300	- 187	- 58	- 30	+ 148	+ 110	+ 52	+ 116	+ 28	- 50	+ 11	- 63	- 58	- 138	- 31	..	..	..	..	..	..	..	..	..
28	X	- 63	- 58	- 99	- 107	- 107	- 132	- 74	- 28	- 11	- 104	- 253	- 143	+ 8	+ 25	+ 275	+ 168	+ 14	- 113	- 74	- 165	- 118	- 124	- 91	- 44	- 59	..	..	..	..	..	..	..	..	..
29		- 85	- 102	- 173	- 82	- 28	- 28	+ 16	+ 80	- 28	- 107	+ 28	- 52	- 192	- 275
30	
31	
MEANS ALL DAYS		- 95	- 100	- 117	- 72	- 50	- 38	- 22	+ 92	+ 37	- 111	- 222	- 228	- 166	- 79	+ 49	+ 59	+ 53	+ 12	- 79	- 43	- 63	- 102	- 100	- 73	- 61	..	..	..	..	..	..	..	..	..
MEANS 10 DAYS		- 113	- 87	- 102	- 45	- 59	- 70	- 22	+ 62	+ 27	- 116	- 250	- 244	- 160	- 115	+ 46	+ 63	+ 44	+ 36	- 82	- 96	- 62	- 105	- 63	- 51	- 68	..	..	..	..	..	..	..	..	..

* = 10 LEAST DISTURBED DAYS

TABLE 69

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS 56.8										DIRECTION N 19°.5 E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		-138	0	-54	-25	+49	+74	+222	+232	-49	-192	-754	-700	-370	-113	+237	+197	-44	-64	+360	+49	-414	-197	+271	-187	-67					
2		-138	-350	-242	-207	+138	-15	+104	+429	+246	-197	-651	-528	-631	-389	+468	-35	+39	+54	0	-20	-69	-301	-143	+104	-97					
3		-868	+439	-606	-212	-89	+222	+493	+513	+276	-158	-542	-754	-463	-187	-104	+197	..	..	..	..	..	..	-508	-365	..
4		-597	+1011	-207	-542	-730	-631	-394	-488	-493	-587	-878	+1016	-680	-261	-10	+182	+89	-25	-177	-163	+113	+335	+143	-94	-338					
5		-251	-532	-749	+439	+182	+217	+251	+237	+335	-54	+99	+158	+217	-99	-133	+44	-360	-227	-187	..				
6		-148	-99	-89	-163	-15	+54	+296	+429	+345	-158	-794	-735	-385	-138	-84	+108	-89	-99	-89	-49	-94	-44	-99	-123	-94					
7		-113	-133	-99	-108	-30	-35	+168	+251	+108	-212	-385	-488	-380	-394	-212	-84	+94	+94	15	+25	-10	5	+59	+94	-75					
8	X	-64	-138	-207	-128	-192	-108	+172	+232	+39	-54	-251	-345	-449	-409	-251	-276	-138	-39	-94	-123	+25	+296	+59	+39	-100					
9		+148	+158	-325	-577	+30	+143	+69	+143	+79	-256	-458	-488	-330	-173	+49	+84	-30	-25	-89	-118	-108	-99	-89	-99	-98					
10	X	-79	-163	-49	-49	-20	0	+128	+340	+207	-286	-518	-700	-587	-385	-143	-25	+10	+49	-39	-94	-108	-49	-54	-104	-113					
11	X	-54	-94	-44	-94	-49	-10	+148	+271	+251	-296	-582	-675	-493	-242	-99	-64	+197	+281	+108	+197	+128	-79	-330	-493	-88					
12		-335	-207	-123	-138	-104	+104	+266	+434	-232	-148	-306	-458	-463	-237	-232	-345	+143	+104	+113	-79	-99	-237	-173	-49	-117					
13		-271	+449	-99	-69	+49	0	+182	+251	+39	-350	-532	-458	-449	-271	-138	+187	-84	-99	-143	-197	-133	-143	-35	-89	-100					
14		-153	0	-138	-197	+182	+123	+187	+232	-89	-316	-454	-542	-587	-394	-69	+15	+59	+54	-20	-99	-94	-118	-89	-64	-107					
15	X	-113	-99	-10	-25	0	+99	+54	+187	+44	-306	-483	-528	-439	-197	-148	+25	+94	+148	-49	-64	-153	-118	-99	-138	-97					
16	X	-163	-138	-94	-64	+35	+25	+89	+148	+30	-291	-532	-528	-449	-330	+35	+104	+15	-113	-173	-163	-108	-153	-153	-138	-130					
17	X	-138	-30	-84	-94	-49	0	+49	+35	-192	-394	-631	-409	-355	-158	+251	+217	-59	-153	-148	-113	-89	-108	-64	-173	-120					
18	X	-148	-99	-173	-39	-39	-39	+84	+94	-133	-394	-385	-355	-291	-439	-187	+143	+99	0	-143	-118	-25	-49	-35	-177	-119					
19		-108	-99	-168	-59	-39	-49	+182	+301	+94	-296	-513	-503	-306	-237	-89	+35	-39	-59	-89	-99	-49	-104	-99	-84	-103					
20	X	-148	-163	-99	-54	-84	+54	+242	+409	+187	-286	-537	-641	-528	-468	-158	-158	-74	-212	+99	+217	-35	+286	+651	-49	-65					
21		-429	-360	-104	-99	-89	-419	+182	+473	+49	-49	-528	-715	-651	-286	-59	+202	+311	+20	-251	-138	-133	-99	-148	-202	-147					
22		-94	-84	-133	-143	-237	-44	+291	+153	+35	-20	-394	-301	-463	-404	-251	+49	+39	-49	-49	-108	-108	-30	-44	+25	-98					
23		-197	-168	-360	-483	+212	+128	+173	+320	+128	-89	-587	-503	-350	-246	-39	+94	+192	+35	-192	-192	-212	-227	-143	-20	-114					
24	X	-187	-138	-104	-89	-99	0	+163	+212	+94	-261	-518	-547	-365	-202	-99	+89	+25	-44	-153	-177	-39	-104	-89	-69	-113					
25	X	-261	+39	-128	-99	-59	-15	+168	+261	-113	-385	-488	-380	-212	-246	-256	-108	+49	-177	-163	-133	-99	-20	-138	-99	-128					
26		-49	-39	-104	-20	-35	-113	+251	+404	+15	-439	-591	-547	-404	-187	-133	+30	-39	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	+99	-355	-458	-246	-444	-385	-385	-173	+651	-217	-163	+725	+394	1060	-493	-493	-246	..
28		-108	-986	-320	+409	-39	-49	+108	+163	-261	-296	-828	-404	-483	-306	-79	-261	+266	-232	-158	-251	-89	-148	-187	-434	-207					
29		-606	0	-276	-330	+123	+108	-296	+44	0	-261	-434	-488	-409	-444	-306	-35	-54	+39	+138	+59	-552	-483	-473	-94	-210					
30		-675	-335	+89	-133	-399	-246	-202	+370	+212	-212	-587	-458	-429	-187	-261	-207	0	-104	-320	-177	-335	-94	-197	-355	-218					
31		-636	-94	-429	+59	+35	-69	+39	+266	-49	-478	-597	-552	-523	-503	-148	-246	-20	-113	-143	+35	-389	-197	-380	-94	-217					
MEANS ALL DAYS		-220	-161	-151	-131	-53	-30	+106	+229	+21	-262	-541	-535	-447	-298	-84	-4	+40	-27	-70	-78	-121	-85	-77	-117	-129					
MEANS 10 DAYS		-136	-102	-99	-74	-56	+1	+130	+219	+41	-295	-492	-511	-417	-308	-106	-5	+22	-26	-76	-57	-50	-10	-25	-140	-107					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										DIRECTION										E 0°-5 N				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		-99	-80	-63	-157	-55	-36	+132	+319	+311	-11	-440	-432	-228	-50	0	+234	-170	-190	-143	-82	-85	-55	-63	-110	-65
7		-74	-116	-102	-116	-55	-85	+58	+99	+47	-124	-192	-198	-74	-107	-30	-41	+36	0	-33	-77	-85	+52	+11	+11	-50
8	X	-30	-30	-171	-140	-182	-138	-16	+99	+36	+33	-88	-38	-110	-110	+22	-146	-116	-132	-113	-138	-74	+80	+198	0	-54
9		-28	+138	+36	-404	-30	+74	-6	+121	+107	-107	-212	-322	-275	-187	+69	+72	+22	+19	-52	-85	-99	-135	-36	-80	-60
10	X	-69	-143	-88	-82	-55	-30	-8	+209	+184	-113	-170	-412	-385	-234	-99	-41	+30	+55	-14	-58	-85	-63	-28	-74	-76
11	X	-36	-60	-50	-69	-63	-14	+30	+129	+170	-104	-239	-358	-300	-110	-33	-22	+311	+440	+275	+138	+206	-418	-132	-421	-30
12		-346	-261	-160	-264	-220	+74	+132	+187	+74	+16	0	-33	-110	-36	-121	-300	+151	-11	-107	-88	+36	-220	-138	-69	-71
13		-619	+646	-25	-50	+28	+11	+110	+270	+132	-66	-110	-72	-297	-228	0	+239	-30	-182	-170	-173	-107	-102	+11	-399	-49
14		+16	+30	-28	-187	+58	+28	+96	+250	+25	-126	-195	-220	-220	-187	-30	-16	0	+14	-11	0	-30	-58	-52	-33	-36
15	X	-82	-91	-36	-28	-28	+80	-28	+135	+116	-74	-192	-226	-88	-19	-88	+50	+28	+82	-104	-110	-110	-33	-25	-55	-39
16	X	-110	-88	-80	-52	-14	-14	-19	+80	+55	-82	-160	-184	-173	-116	+58	+110	+28	-116	-162	-165	-58	-118	-107	-69	-65
17	X	-102	0	-96	-85	-55	-55	-11	+11	-82	-187	-305	-129	-50	+50	+316	+206	+8	-91	-138	-113	-33	-28	-14	0	-41
18	X	-74	-33	-118	-30	-33	-55	+55	+85	-104	-214	-129	-132	-110	-182	+44	-52	+22	+14	-135	-88	-16	-33	-28	-88	-62
19		-82	-58	-162	-55	-33	-55	+77	+242	+118	-116	..	..	..	..	+63	..	..	..	-82	-60	0	-41	-44	-28	..
20	X	-80	-151	-30	-30	-66	-47	+52	+223	+168	-55	-148	-192	-151	-253	-85	-110	-52	-316	+30	+226	+33	+289	+456	-55	-14
21		-190	-245	-69	-58	-102	-248	-50	+165	+28	+258	-60	-223	-352	-55	-22	+212	+366	-60	-250	-143	-110	-60	-121	-176	-65
22		-96	-38	-110	-124	-157	-52	+316	+179	+22	+192	+47	+41	-198	-160	-179	-28	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	-44	+28	+300	+258	-14	-275	-204	-132	-50	0	+36	+179	-28	-212	-135	-110	-148	-69	-16	..
24	X	-85	-91	-58	-38	-74	-28	+52	+182	+170	0	-173	-275	-206	-63	-19	+96	-28	-22	-132	-121	-107	-132	+8	-74	-51
25	X	-248	+88	-82	-110	-74	-58	+28	+126	-38	-140	-132	-110	-121	-82	-176	-55	+28	-162	-94	-113	-55	+30	-99	-69	-72
26		-25	+28	-77	-28	-11	-113	+143	+385	+121	-135	-242	-253	-173	-19	-60	+36	-184	-250	-52	-69	-14	-157	+85	+248	-34
27		+69	+289	+302	-58	-324	-192	+77	+82	+248	-77	+168	-41	-258	-214	+52	+292	-605	-151	+825	+550	-605	-440	+1018	+330	+13
28		+358	-852	-82	+358	+88	-94	+69	+220	+187	+96	-338	-297	-349	-151	-41	-69	+688	-275	-110	-275	+96	-632	+220	-275	-61
29		-151	+55	-55	-358	+248	+412	-69	+124	+275	+162	+33	+96	-143	-322	-208	-234	+63	+236	-47	-44	-124	-270	-311	+82	-23
30		-412	-179	+143	-28	+14	-192	-151	+330	+619	+192	-336	-22	-179	+33	-129	-82	-28	+77	-104	-151	-179	-151	+138	-160	-39
31		-399	+192	-151	+91	+66	+14	+69	+404	+214	-69	-82	-195	-132	-132	-30	+63	+66	+60	+44	+118	-132	-33	+280	+88	+12
MEANS		-122	-41	-50	-84	-41	-31	+32	+184	+133	-40	-163	-186	-195	-121	-26	+57	+21	-42	-35	-46	-76	-117	-33	-63	-45
ALL DAYS																										
MEANS		-92	-60	-81	-66	-64	-36	+14	+128	+68	-94	-174	-206	-169	-112	-6	+4	+16	-25	-59	-54	-30	-43	+23	-91	-50
10 DAYS																										

* = 10 LEAST DISTURBED DAYS

TABLE 71

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION										N 19°.5 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN															
1		-175	-378	-364	-107	-126	-141	+53	+10	+136	-335	-500	-694	-558	-388	-242	-233	-44	+276	-236	-209	+155	-519	-354	-112	-214															
2		-126	-262	-233	-150	-179	-141	+92	+97	-53	-296	-582	-548	-441	-340	-262	-204	-87	-107	-155	-112	-136	-204	-228	-252	-205															
3	X	-262	-233	-262	-194	-184	-204	+92	+199	+78	-291	-529	-606	-757	-621	-344	-131	+15	+24	-48	-44	-58	-68	-194	-236	-205															
4	X	-189	-209	-155	-179	-150	-97	+73	+213	+44	-296	-572	-630	-485	-306	-378	-194	-296	-189	-150	-107	-150	-146	-97	-189	-101															
5		-204	-223	-78	-102	-97	-306	-34	+344	+160	-456	-524	-577	-475	-281	-146	-63	-58	-146	-146	-170	-112	-184	+155	-349	-170															
6		+102	-63	-388	-146	-155	-87	-393	+233	+247	-597	-102	-393	-218	-175	-126	-184	-146	-73	-136	-150	-146	-97	-102	-150	-144															
7		-150	-126	-364	-199	-170	-97	+102	+150	-44	-301	-567	-630	-630	-524	+10	-163	-342	..	..	..	..	..	..	..	..							
8		..	..	..	..	..	..	..	-109	-218	-396	-634	-658	-584	+45	-287	-144	+50	+15	-173	+356	-163	-337	-99	-183	..								
9		-208	-193	-198	-99	-243	-89	+173	+89	-213	-480	-594	-441	-252	-99	+45	+84	-15	-144	-223	-45	-198	-99	-178	-124	-164															
10	X	-99	-54	-89	-69	-25	-35	+139	+158	-109	-495	-668	-535	-381	-129	+188	+193	-10	-153	-148	-124	-148	-54	-129	-148	-122															
11	X	-134	-99	-40	-64	-124	0	+223	+223	-223	-540	-609	-446	-203	-25	+134	+139	-50	-168	-148	-158	-119	-50	-94	-109	-112															
12		-94	-84	-40	-59	-94	-15	+302	+351	+139	-248	-530	-569	..	..	..	..	..	..	..	..	..	..	..	..	..		
13		..	..	..	..	..	..	..	..	..	-188	-441	-520	-396	-322	+25	+40	-5	-74	-94	-94	-198	-40	-148	-64	..						
14	X	+74	-148	-40	-40	-25	+45	+238	+262	+79	-252	-535	-668	-396	-74	-50	+84	-104	-104	-94	-89	-64	-99	-94	-59	-90															
15	X	-183	-139	-74	-64	+20	+74	+59	+74	-94	-213	-436	-386	-302	-198	-25	+99	-144	-168	-153	-178	-104	-99	-64	-94	-116															
16	X	-163	-124	-59	-25	+30	+50	+124	+129	+168	-40	-351	-401	-411	-371	-218	-129	-94	-104	-99	-94	-50	-69	-59	-158	-105															
17	X	-148	-134	-25	-54	-144	-45	+114	+257	+198	-89	-396	-505	-648	-549	-248	-50	+89	+69	-64	-99	0	-124	-69	+59	-108															
18	X	-20	-99	-248	-208	-94	+50	+109	+356	+312	-564	-535	-535	-510	-213	-84	+346	+262	+139	+525	-243	-297	-148	-69	+15	-73															
19		+50	+35	-891	+441	-64	-89	+148	+163	+79	-30	-193	-470	-525	-257	+35	-158	-248	-89	+525	+233	+84	-119	-129	-148	-67															
20		-396	-446	+163	-94	-193	-158	0	+228	-94	-183	-342	-464	-353	-194	-125	-30	0	+120	-206	0	+133	-322	+228	-202	-122															
21		-301	+17	-47	-172	-142	-82	-43	+163	-43	-125	-215	-344	-206	-219	-168	+34	-73	-172	-172	-133	+120	+391	-52	-366	-98															
22		-258	-168	-258	+236	+185	-219	0	-112	-120	-26	-215	-366	-421	-150	-30	-43	-219	-146	+17	+47	-82	-108	+99	-176	-106															
23		-86	-796	+366	-73	-249	+56	-194	+168	+43	-516	-236	-258	+228	-39	-77	+43	-142	+73	-168	-292	+172	-64	-108	-219	-99															
24		-331	-181	-452	-22	-129	+215	+280	+344	-387	-150	-335	-159	+43	-64	+86	+473	+108	-400	+430	+99	-473	-159	-968	+129	-83															
25		-258	-150	+77	-258	0	-77	-645	+344	-129	-86	0	-194	+43	+280	+366	+86	-314	+163	+34	-215	-185	-322	+17	-129	-65															
26		-344	+142	-90	-228	-52	+133	+90	+112	-43	-236	-413	-267	-64	+163	-86	-22	0	+624	-150	-301	-327	-245	-129	-172	-79															
27		..	..	..	..	..	..	..	+22	+22	+142	-236	-301	-133	-292	-120	-56	-3	-47	-82	-47	+73	-168	-138	-120	..								
28	X	-64	-443	+43	-82	-155	+17	+168	-17	+129	-232	-310	-305	-254	-215	-185	-168	-138	-39	+159	-494	-163	-17	-103	-129	-125															
29		-82	-90	-77	-116	+228	+43	+176	+327	+116	-95	-322	-546	-335	-215	-215	+108	+206	+194	-163	+30	-138	-129	-185	-370	-69															
30		-22	-215	+120	-125	-194	-215	+335	+262	-43	-163	-301	-361	-344	-267	+26	-267	-112	+43	-30	..	..	..	..	..	..									
MEANS ALL DAYS		-159	-185	-142	-78	-86	-45	+43	+182	+12	-276	-396	-447	-328	-195	-90	+3	-63	-22	-43	-119	-95	-127	-121	-156	-122															
MEANS 10 DAYS		-119	-168	-95	-98	-85	-14	+134	+185	+58	-301	-494	-502	-435	-270	-121	+19	-47	-69	-22	-163	-115	-87	-97	-111	-126															

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT					EASTWARD		LINE		OW	LENGTH IN KMS					93.9					DIRECTION	E.O.S.N				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9		9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19			19-20	20-21	21-22	22-23	23-24	MEAN
1		+118	-162	-212	-58	-33	-30	+358	+91	+289	+110	+19	-297	-212	-118	-88	-182	+110	+509	-248	-234	+	8	-264	-173	-16	-30
2		-55	-126	-82	-77	-99	-28	+160	+121	+146	+41	-198	-176	-140	-118	..	-60	..	..	..	..	..	..	..	..	..
3	X	-91	-154	-118	-77	-50	-116	+72	+305	+374	+121	-41	-220	-412	-360	-236	-190	-28	+88	+50	-19	+80	+82	-72	-138	-48	
4	X	-30	-58	-52	-77	-60	-30	+85	+327	+275	+77	-157	-256	-217	-69	-182	-170	-333	-143	-50	-22	-38	-19	0	-74	-53	
5		-80	-110	+47	-41	+28	-110	-110	+297	+490	-280	-138	-336	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	+239	-302	+157	+688	-454	+380	+41	+204	+55	+33	-256	-148	+28	-11	-33	-28	+50	0	-47	..
7		-25	-8	-116	-160	-74	-107	+113	+305	+184	+41	-190	-280	-380	-272	0	-209	-235	-144	-99	+431	+70	+483	-55	-26	-31	
8		-21	-287	-196	-183	-128	-177	-70	+52	+55	0	-70	-55	-117	+99	-209	-65	+271	+183	-170	-86	+326	-548	+47	+29	-55	
9		+13	-81	-110	-26	-157	-39	+141	+201	-26	-44	-251	-274	-107	+21	-26	+10	+31	-81	-151	-104	-86	-107	-104	-65	-59	
10	X	-78	-50	-91	-63	-8	-21	+94	+131	+70	-167	-405	-365	-316	-52	+243	+136	-26	-23	0	-60	-107	-8	-125	-70	-54	
11	X	-97	-81	-26	-50	-130	-26	+204	+300	-8	-261	-337	-282	-130	+55	+99	+39	-47	-81	-81	-65	-23	+70	+21	-78	-42	
12		-29	-91	-52	-47	-34	-18	+154	+287	+316	-31	-245	-373	..	..	..	..	..	..	..	..	..	..	..	..	..
13		..	..	..	..	..	..	..	..	..	0	-133	-217	-172	-230	-104	-123	-57	-26	-21	-57	-177	+47	-123	-65	..
14	X	+123	-81	-81	-57	-26	-16	+175	+219	+177	+94	-136	-284	-138	+50	-91	-29	-201	-81	-26	-78	-50	-18	-31	-26	-26	
15	X	-86	-123	-99	-65	+13	+37	-34	-23	0	-8	-99	-99	-39	-13	+57	+102	-230	-183	-128	-133	-39	-26	+26	-21	-51	
16	X	-123	-104	-65	-16	+26	+18	+84	+42	+177	+133	-76	-125	-217	-266	-183	-115	-99	-50	-34	-31	+16	+16	+52	-70	-42	
17	X	-97	-81	-18	-57	-81	-50	+52	+235	+290	+81	-112	-157	-431	-436	-258	-104	+60	+151	-55	-10	-13	-52	+16	+162	-40	
18	X	+21	-44	-196	-130	-117	-18	+68	+360	+381	-99	-253	-303	-371	-128	-81	+587	+326	+191	+347	-180	-284	-117	-10	-5	-3	
19		+170	-29	-574	+78	-44	-10	-10	+73	+392	+78	+99	-78	-274	-146	+157	-230	-305	-110	+337	+230	+238	+10	-97	-68	-5	
20		-392	-300	+196	-76	-141	-151	-50	+218	+141	-29	-149	-179	-136	-51	-76	0	+12	+70	-115	+88	+142	-439	+209	-39	-48	
21		-242	+33	-30	-121	-130	-58	-15	+100	+45	+27	+36	-64	+85	-64	-155	-9	-136	-145	-167	-94	+245	+500	+33	-318	-27	
22		-258	-127	-188	-106	+188	-70	+36	+24	+24	+248	-33	-191	-285	+82	+118	-112	-121	-100	+61	-64	+30	-73	+152	-88	-36	
23		-73	-485	+76	+30	-161	-30	-79	+276	+364	+21	+58	-76	+224	-88	-51	+221	-21	-106	-100	-264	+288	-394	+152	+45	-7	
24		-285	-33	-303	-342	-61	+106	+273	+606	+164	-106	-227	+121	+242	+85	+51	+364	-61	-191	0	+379	-212	-121	-454	+121	+2	
25		-152	+106	+97	-82	-27	+55	-333	+242	+227	-79	+273	+100	+51	+258	+76	+61	-415	-182	-206	-9	-218	-485	+258	-45	-18	
26		-76	+55	-118	+6	-203	-9	-30	+118	+39	-73	-203	-125	+100	+206	+67	+55	+61	-136	+112	-170	-188	-106	-73	-48	-31	
27		..	..	..	..	..	..	..	+158	+179	+164	-82	-39	+106	-318	-179	-109	-30	+36	-21	-15	+33	-85	-88	-30	..
28	X	-30	-291	-94	-55	-188	0	+97	+24	+248	-51	-70	-206	-88	-139	-218	-188	-176	+112	+321	-539	-264	-158	-100	-106	-90	
29		-88	-70	-82	-251	+179	+79	+100	+306	+276	+152	+6	-194	-97	-97	-212	+33	+206	-24	+82	+61	-82	-155	-61	-394	-14	
30		+36	-58	+21	-115	-91	-179	+158	+303	+97	+58	-112	-145	-121	-121	+15	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		-78	-107	-104	-84	-61	-29	+56	+204	+181	+12	-101	-169	-142	-70	-52	0	-59	-21	-14	-42	-7	-84	-17	-54	-35	
MEANS 10 DAYS		-49	-107	-84	-65	-62	-22	+90	+197	+198	-8	-169	-230	-236	-136	-85	+7	-75	-2	+34	-114	-72	-23	-22	-43	-45	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	
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TABLE 73

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1932
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
OCTOBER 1932
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		..	..	..	..	..	..	..	+206	+125	-120	-430	-636	-525	-378	-159	-47	9	-159	-52	+22	-99	-64	-22	-120	..
2		+60	..	..	..	..	..	..	..	+129	-146	-344	-267	-340	-335	-125	-56	-82	-30	+52	+34	-30	-129	-90	-108	..
3		-353	-56	-69	-125	-241	-86	-39	..	..	-138	-301	-408	-262	-142	-52	-125	-108	-26	+103	+39	-95	..	..	..	..
4		..	..	..	..	..	..	..	-108	0	-138	-382	-473	-391	-103	-73	+120	0	-90	+34	-69	-120	-82	-129	-146	..
5		-120	-133	-47	+22	..	..	..	..	..	-211	-353	-301	-262	-86	+125	+95	-120	-215	-185	-86	-73	-103	-116	-125	..
6		-125	-138	..	..	..	..	..	..	-39	-267	-378	-314	-176	-129	+13	-90	-181	-116	-163	-129	-95	-90	-86	-86	..
7		-133	-138	-129	-120	-90	+64	+142	+47	-172	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	..	..	-262	-396	-172	-271	-172	-47	-56	-138	-86	-168	-108	-112	-64	-47	+39	..
9		+30	-34	-86	-77	-138	-56	-43	+202	+43	-529	-400	-421	-22	+22	+34	+68	-30	-86	-77	-133	+120	-90	-22	-181	-78
10		-202	+52	-43	-52	-125	-39	+64	+103	-17	-473	-340	-348	-224	+142	+90	+129	-163	-133	-172	-215	-77	-211	-77	-95	-101
11	X	-52	-245	-34	-86	-34	-13	+159	+271	+39	-228	-469	-477	-387	-206	-99	+13	+34	-56	-103	-163	-172	-159	-125	-215	-117
12	X	-95	-112	-112	-120	-34	-30	+108	+228	+52	-292	-494	-606	-404	-17	+95	+129	+125	-99	-86	-120	-86	-125	-138	-176	-100
13	X	-129	-120	-129	-90	-34	-47	+159	+232	+176	-314	-671	-469	-288	-99	+43	+99	+34	-103	-64	-39	-73	-120	-142	-129	-97
14		-129	-133	-116	-103	-90	-39	+125	+361	+310	-176	-697	-838	-546	-305	-150	+95	+13	-99	+155	+181	+95	-95	-288	-297	-115
15		+86	-494	-366	+138	+236	+43	+258	-146	+241	-163	-43	-215	-142	+52	+47	+228	+155	-82	-73	-86	-43	-26	+43	-150	-21
16		-314	-658	-120	-202	-439	+206	+26	+280	-56	-310	-473	-460	-335	-103	-26	-43	-39	+267	-181	-90	-202	-172	-77	-95	-151
17	X	-262	-430	-168	+129	-150	-73	-129	+95	+288	-228	-563	-310	-150	+30	-129	-95	+82	+232	-73	-353	-206	-189	-116	-163	-122
18	X	-176	-172	-159	-198	-47	-43	+47	+181	+86	-267	-301	-348	-267	-215	-168	-108	-142	-163	-69	-34	-39	+39	-215	+69	-113
19		-133	-116	-211	-254	-249	-159	-47	+194	+172	-335	-632	-512	-129	-17	+43	+64	-86	-73	-56	-116	-56	-34	-202	-95	-127
20		-120	-108	-90	-404	-271	-443	-95	+335	+172	+421	-882	-155	-60	0	+408	+503	+95	+249	+722	+43	-770	-138	+249	-335	-28
21		-357	-714	1075	+120	-245	-344	-30	-77	-43	-228	-215	-82	-69	-163	-69	-176	-224	-138	-52	-138	-120	-39	-125	-211	-201
22	X	-176	-120	-172	-99	-172	-30	-77	-116	+90	-120	-245	-133	-133	+99	-142	-43	-142	-47	+39	+86	-52	-163	-224	-258	-98
23		-189	+224	-688	-138	+108	+17	-86	+47	-314	-138	-271	-391	0	-34	+13	+142	-241	-108	-34	-82	+138	-82	-22	-322	-102
24		-77	-245	-344	+52	-56	-241	+34	+181	-30	-52	-228	-253	-202	-86	-95	-30	-133	-77	+26	-13	-43	-262	-95	-34	-100
25	X	-129	-56	-396	-43	-254	-421	-189	+99	+408	-39	-284	-305	-215	-185	-138	-77	-90	-95	-146	-125	-52	-47	-120	-185	-128
26	X	-172	-163	-133	-150	-95	-116	-22	+64	-34	-211	-318	-361	-249	-120	-17	+52	-77	-125	-47	0	-90	-73	-185	-34	-112
27		-43	+103	-236	-34	-774	+408	-206	-95	-77	+129	-211	-262	-168	-95	-43	-108	+43	-82	-112	+9	+34	-202	-258	-215	-104
28	X	-206	-215	-129	-116	-60	-73	+13	+150	+116	-133	-353	-387	-327	-150	-22	-52	-133	-181	-52	+17	-108	-82	-150	-224	-119
29	X	-172	-176	-168	-116	-116	-73	-13	+172	+172	-146	-387	-460	-314	-310	-172	-47	-86	+30	+86	+249	+90	+129	+215	-215	-76
30		+215	-378	-387	-378	-43	+73	-43	+64	-155	-163	-297	-335	-129	-99	+52	-120	0	+77	+86	+77	-17	-108	-224	-155	-99
31		-340	-116	-176	-82	-163	-228	-22	-13	+120	-232	-370	-292	-176	-99	-202	-108	-26	-39	+43	+138	+494	+602	+99	-1354	-106
MEANS ALL DAYS		-137	-192	-241	-100	-141	-75	0	+122	+76	-184	-398	-370	-215	-85	+31	+27	-45	-40	-10	-39	-54	-72	-96	-220	-105
MEANS 10 DAYS		-157	-181	-160	-89	-100	-92	+6	+138	+139	-198	-409	-386	-273	-117	-75	-13	-40	-61	-52	-48	-79	-79	-120	-153	-108

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		..	..	..	..	..	..	..	+184	+169	+62	-124	-269	-258	-252	-148	-104	-24	-181	-24	+83	-27	-21	+74	+15	..
2		-53	..	..	..	..	..	..	..	+110	-38	-151	+65	-71	-201	-77	-59	-118	..	..	..	..	-62	+30	-30	..
3		-281	-21	-95	-62	-148	-68	+47	..	..	-30	-92	-118	-38	0	+33	-38	-74	+24	+101	+53	-15	..	..	..	..		
4		..	..	..	..	..	..	..	-178	-74	-38	-228	-181	-139	+30	+113	+240	+44	+65	+30	-92	-36	-71	-68	-24	..
5		-30	-62	+27	-15	..	..	..	..	..	-101	-53	-45	-95	+59	+222	+127	-101	-234	-192	-50	-33	-74	-41	-38	..	
6		-33	-89	..	..	..	..	..	..	+83	-175	-160	-95	-24	-89	+56	-62	-50	+104	-178	-118	-53	-33	-30	-30	..
7		-89	-89	-65	-74	-50	-56	+65	+201	+204	+6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	..	..	-38	-115	-38	-112	-204	-178	-104	+68	+36	-172	-80	-65	-15	-33	-27	..
9		+21	-27	-59	-89	-98	-77	-50	+62	+275	-485	-332	-266	+163	+169	+38	+204	+59	-33	-112	-80	+74	+30	+112	-110	-25						
10		-154	-56	-44	-53	-18	+15	+154	+222	+408	-157	-379	-228	-133	+184	0	+98	-71	-112	-133	-95	-24	-172	+36	-36	-31						
11	X	+9	-151	-33	-92	0	+62	+124	+243	+115	0	-213	-281	-184	-148	-148	-47	+118	+83	-86	-44	-178	-36	-30	-110	-43						
12	X	-30	-83	-74	-80	-21	0	+104	+234	+148	-62	-186	-349	-231	-36	-65	+62	+89	-56	-95	-47	-9	-59	-83	-98	-43						
13	X	-80	-74	-86	-53	-38	+12	+98	+272	+204	-83	-364	-263	-163	-86	+15	+86	+62	-33	-53	-12	-21	-36	-50	-53	-33						
14		-59	-62	-53	-59	-27	+30	+110	+334	+373	+83	-352	-472	-385	-275	-175	+74	0	+68	+260	+192	-101	+201	-204	-230	-39						
15		+213	-237	-148	-275	+184	+30	+142	+364	+488	-21	+157	-124	-38	+104	+68	+370	+343	-118	-186	-118	-364	+272	-311	-74	+30						
16		+30	-512	-101	+30	-444	+110	-21	+201	+95	-24	-216	-272	-204	-74	-36	-62	-30	+308	-148	+38	-198	-98	+24	-59	-69						
17	X	-175	-133	-186	+83	-154	-59	+130	+44	+198	+92	-178	-24	0	+65	-148	-50	+65	+163	-101	-260	-145	-118	-15	-65	-40						
18	X	-62	-110	-83	-89	-27	0	+9	+130	+142	-36	-27	-83	-47	-68	-110	-65	-124	-207	-86	-41	+30	+154	-326	+207	-38						
19		+36	+12	-118	-151	-166	+59	-124	+62	+95	-178	-334	-213	+44	+65	+95	+101	-21	-12	-56	-68	+30	-12	-89	+15	-39						
20		-56	-18	-24	-163	-272	-207	-278	+213	+252	+888	-80	-36	-21	+148	+636	+600	-53	+370	+666	+38	-651	-30	+260	-266	+80						
21		-36	-459	-592	+86	-163	+30	+18	+6	+21	-127	-74	-24	+145	-59	-86	-118	-148	-115	-9	-83	-53	+38	-83	-130	-84						
22	X	-80	-33	-110	-24	-59	+38	+15	-145	+231	+98	-59	+115	+33	+133	-154	+53	-175	+89	+74	-36	-175	+41	-92	-178	-17						
23		-104	+118	-622	+74	+38	-33	+50	+169	+30	-15	-133	-207	+216	+18	-24	+172	-204	-92	+30	-33	+110	-30	+136	-178	-22						
24		-30	-169	-320	+127	-53	-92	+44	+47	+124	+71	-24	-178	-36	-18	-44	+41	-157	-56	+33	+53	0	-124	-98	+50	-34						
25	X	-36	+30	-302	-83	-198	-275	-118	+222	+379	+33	-89	-115	-71	-59	-136	-80	-71	-9	-110	-62	+15	-83	+21	-27	-51						
26	X	-95	-110	-71	-65	-53	-24	+33	+33	+44	+27	-118	-192	-121	-68	-9	+41	-59	-80	+24	-33	0	+71	-83	+59	-35						
27		-18	+38	-186	-240	-503	+355	-157	+225	-121	+118	-44	-83	+36	+59	+15	-115	-65	-30	-86	+95	+133	-349	-12	-89	-43						
28	X	-110	-154	-89	-65	-53	-44	-9	+112	+145	+38	-121	-237	-228	-142	-62	-47	-86	-157	-24	+86	-30	0	-59	-124	-61						
29	X	-89	-127	-142	-110	-89	-38	-24	+136	+198	+15	-151	-204	-130	-213	-133	+44	-12	-47	+118	+240	+154	+201	-340	-195	-39						
30		+272	-95	-148	-355	-30	+186	-65	0	+30	-53	-74	-142	-18	-36	+59	-98	+15	-112	+216	+148	0	-71	-142	-207	-30						
31		-219	-65	-92	-59	-30	-201	+27	-56	+104	-50	-95	-18	-30	-30	-195	-101	-56	-83	+68	+243	+488	+503	-30	-888	-36						
MEANS		-37	-108	-160	-74	-99	-5	+9	+136	+173	+7	-156	-170	-61	-16	-26	+51	-25	-18	+9	+5	-40	+13	-63	-124	-32						
ALL DAYS																																
MEANS		-75	-94	-118	-58	-69	-33	+36	+128	+180	+12	-151	-163	-114	-62	-95	0	-19	-25	-34	-21	-36	+14	-106	-58	-40						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

TABLE 75
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 19°.5 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+783	-43	-43	-378	-340	-310	-185	-64	-34	-159	-301	-391	-477	-387	-77	-43	+43	+228	-34	+43	+56	-43	-52	-194	-100						
2		-138	-473	-47	-288	-421	+47	+120	+52	-82	-181	-194	-185	-396	-254	-129	-26	-26	-77	-43	-39	0	+47	+64	-99	-115						
3		-254	-490	-163	+120	-86	-116	+34	+198	+34	-125	-378	-477	-258	-228	-125	-116	-56	-77	-86	-43	-30	+292	-194	-297	-122						
4		-150	-90	-267	-185	-99	-82	-43	+163	-30	-129	-344	-430	-288	-95	+108	+185	-125	-176	+142	+258	-189	-86	-331	-215	-104						
5		-82	-86	-103	-185	-95	-34	-47	+9	+43	-116	-340	-314	-224	-103	-52	0	-77	-69	-34	-47	-52	-176	-56	-172	-100						
6		-181	-69	-172	-181	-133	-120	-43	+30	-34	-86	-206	-271	-258	-95	-129	-125	-77	+22	-120	-185	-129	-77	-86	-112	-118						
7	X	-142	-133	-150	-125	-138	-138	-60	+69	+133	+194	-125	-340	-258	-163	-129	-176	-163	-125	-95	+9	-13	-120	-138	-125	-102	-106					
8	X	-129	-120	-133	-125	-99	-86	-86	+47	+47	+82	-168	-189	-241	-258	-163	-163	-86	-22	-52	-43	-120	-60	-206	-172	-106						
9	X	-206	-125	-116	-120	-90	-90	-43	+69	+77	-34	-271	-348	-331	-176	-86	-52	-82	-56	+30	-95	-150	-142	-150	-142	-114						
10	X	-95	-95	-125	-90	-82	-73	-13	+99	+34	-112	-228	-378	-383	-211	-163	-82	-30	0	-47	-39	-116	-86	-129	-120	-107						
11		-138	-228	-150	-60	-95	-82	+47	+99	+90	-116	-241	-82	-172	-168	-159	-163	-125	0	-129	-176	-125	-90	-43	-430	-114						
12		-52	-34	-95	+82	-95	-86	-120	+236	-17	-245	-13	-185	-86	-163	-206	-86	-47	-30	+26	+181	+60	-43	-202	-202	-59						
13		-297	-146	-211	-163	-396	+159	+86	+172	-116	-176	-99	-206	-206	-82	-52	-99	-99	-95	-116	-43	-34	-47	+17	+56	-93						
14		+108	-430	+43	-138	-142	-215	-322	+133	+77	+13	-43	-267	-129	-116	-120	+408	-258	-228	-82	-43	+34	+39	-86	-288	-86						
15		-138	-228	-142	-172	-172	-211	-133	+69	+52	+77	-215	-507	-662	-43	+26	-90	+108	+77	+125	+903	+116	+69	-236	+43	-54						
16		+56	-464	-593	1032	+297	-99	-228	+86	-138	+108	+224	-206	-232	+77	+288	-116	-280	-297	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	+172	+159	-22	-90	-211	-82	-99	-297	-77	-17	-34	+43	+56	+95	-86	-292	..
18		-159	-284	-206	-189	-150	-267	-288	-142	+288	0	+146	-43	-112	-43	-116	-297	-138	-22	+224	-198	-125	-82	+30	-133	-96						
19		-129	-408	-120	-64	-163	-258	-421	-129	+116	+133	-26	-108	-82	-43	-95	-34	-95	-39	-90	-43	-43	-17	-56	-159	-99						
20	X	+13	-215	-159	-181	-211	-219	-163	+13	+86	+69	+95	-150	-357	-202	-202	-99	-120	-64	-52	-73	+30	-69	-185	-47	-103						
21	X	+30	-176	-159	-194	-181	-168	-168	+26	+172	+172	+47	-249	-335	-219	-181	-176	-95	-64	-22	-47	-17	-17	-99	-112	-93						
22	X	-172	-138	-138	-185	-224	-150	-125	+17	+56	+120	-30	-142	-215	-206	-241	-181	-95	-43	-43	+17	+30	-77	-120	-168	-102						
23	X	-168	-176	-172	-108	-138	-353	-56	+17	+86	+129	+39	-168	-310	-215	-125	-163	-86	-77	-64	-77	-86	-77	-142	-142	-110						
24	X	-138	-125	-125	-120	-129	-150	-86	+64	+90	+30	-116	-292	-348	-318	-206	-82	-13	0	-39	-22	-86	-120	-142	-138	-109						
25		-86	-163	-181	-129	-95	-39	-77	+176	+77	-559	-138	-163	-258	-150	+47	-95	+103	+163	+30	-43	-34	-95	-82	-64	-77						
26		-138	-120	-116	-52	-224	-168	-236	+82	+108	+73	-52	-215	-262	-267	-181	-125	-43	+22	+22	-43	-30	+172	-189	-288	-95						
27	X	-194	-176	-150	-125	-103	-155	-64	0	+43	+13	-129	-249	-288	-211	-116	-43	-13	0	-56	-77	-138	-120	+22	+30	-96						
28		-69	-172	-301	-138	-185	-559	-116	+43	+125	-24	-254	-297	-258	-194	-133	-43	+22	-22	+194	+138	-99	-120	-120	-86	-112						
29		+43	-176	-142	-224	-120	-116	-77	+13	-125	-125	+43	-258	-194	-202	-69	-125	+52	+13	+43	-43	-189	-129	-30	-125	-94						
30		-64	-155	-69	-150	-249	-146	-77	+52	+95	+133	-39	-254	-427	-374	-297	-150	-99	+43	+30	+82	-34	-133	-172	-172	-109						
MEANS ALL DAYS		-84	-188	-140	-138	-166	-149	-99	+58	+53	-34	-128	-256	-279	-185	-120	-80	-61	-26	-12	+8	-54	-50	-111	-145	-100						
MEANS 10 DAYS		-120	-148	-143	-137	-140	-158	-86	+42	+82	+66	-89	-250	-307	-218	-161	-122	-78	-45	-44	-45	-67	-89	-129	-114	-104						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										DIRECTION										E 0°.5 N	MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																		
1		+796	+53	+30	-342	-242	-280	-133	-41	+83	-30	-65	-168	-260	-204	-83	-44	+118	+224	+65	+74	+91	-139	+24	-88	-23																	
2		-53	-227	-35	-189	-239	-30	+74	-35	-88	-80	-32	+24	-248	-97	-59	+27	-32	-71	-38	-12	+83	+150	+27	+27	-48																	
3		-183	-236	-124	+97	-62	-86	-15	+189	+59	-24	-174	-257	-74	-112	-153	-65	-121	-44	-56	-30	-21	+192	-142	-204	-69																	
4		-97	-62	-165	-124	-65	-59	-30	+100	+38	+83	-35	-148	-171	0	+316	+236	-177	-271	+201	+142	-115	-35	-289	-124	-35																	
5		-124	-30	-65	-124	-68	-91	-35	-32	+83	+32	-148	-91	-38	-30	+38	+59	+32	-115	-56	-24	+30	-94	-21	+15	-37																	
6		-162	+21	-115	-142	-88	-83	-62	-27	-32	+30	+35	-24	-88	-50	-94	-130	-59	+62	-127	-142	-86	0	+27	-35	-57																	
7	X	-80	-80	-121	-88	-86	-139	-80	-30	+62	+289	+130	-177	-94	+30	-27	-148	-156	-156	-86	+59	+62	-35	-65	-59	-45																	
8	X	-77	-74	-115	-83	-53	-56	-30	+18	+50	+109	+30	+30	-53	-103	-156	-212	-121	-24	-65	-24	-44	+21	-112	-91	-52																	
9	X	-121	-74	-74	-88	-68	-71	-38	0	+50	+65	-38	-121	-153	-86	-59	-9	-35	-15	+56	-62	-80	-30	-62	-68	-49																	
10	X	-38	-18	-88	-53	-71	-100	-24	+65	+38	+21	-38	-88	-145	-139	-171	-121	-56	+30	-27	+30	-50	0	-30	-27	-46																	
11		-118	-236	-139	-68	-94	-65	-15	-12	+65	+59	-30	+233	+15	-88	-118	-145	-91	+24	-121	-148	-18	+21	+94	-221	-51																	
12		+30	+30	-21	+50	-59	+30	-168	+221	+83	-62	+204	-9	+142	-41	-148	-118	-124	-30	+74	+224	-30	+86	-115	-65	+8																	
13		-171	-88	-165	-133	-316	+65	+59	+127	-41	-30	+12	-44	-97	+24	+53	-180	-153	-127	-112	+30	+80	+56	-30	-30	-50																	
14		+283	-357	+206	-142	-133	+65	-363	+103	+100	+124	+124	-91	-30	-83	+15	+507	-333	-313	-106	-50	+94	+109	-192	-80	-23																	
15		-30	-112	-86	-115	-127	-83	-112	-47	-9	+118	-53	-286	-499	+53	-15	-121	+112	+68	+177	+664	+295	-118	+103	+74	-6																	
16		+266	-316	-392	-678	+94	-118	-124	+145	-53	+224	+442	-80	-88	+121	+454	-65	-640	-357	0	-15	-50	-27	+56	-59	-52																	
17		+65	-366	-156	-53	-165	0	-153	+56	-32	+142	+88	+88	-30	+41	-83	-289	-118	-109	-77	+83	+100	+156	-50	-150	-42																	
18		-127	-260	-149	-204	-83	-156	-233	-124	+251	-53	+142	+100	+50	+171	-88	-271	-168	-56	+133	-124	-77	-9	+21	-83	-58																	
19		-27	-360	-62	-59	-88	-204	-266	-127	+88	+103	+41	+59	+68	+32	-38	-53	-148	-59	-130	-32	+18	+59	-35	-177	-60																	
20	X	+139	-115	-112	-127	-165	-165	-115	-77	+80	+86	+230	+9	-153	-83	-153	-88	-165	-86	-59	-68	+27	-112	-80	+50	-54																	
21	X	+41	-145	-127	-130	-142	-115	-142	-18	+124	+165	+124	-32	-88	-112	-83	-153	-119	-118	-50	-56	+24	+18	-15	-41	-50																	
22	X	-124	-77	-80	-142	-153	-139	-91	-15	+18	+80	+86	+44	-24	-88	-204	-204	-145	-80	-27	+32	+50	-21	-56	-88	-60																	
23	X	-115	-139	-150	-59	-94	-180	-115	-38	+30	+127	+115	-24	-153	-145	-62	-148	-121	-86	-62	-38	-50	+12	-97	-88	-70																	
24	X	-88	-62	-93	-83	-88	-118	-65	+83	+124	+86	-59	-139	-165	-242	-204	-127	-38	-6	-27	+18	-30	-68	-88	-91	-65																	
25		-27	-109	-142	-127	-56	+24	-41	+83	+91	-496	-121	-44	-118	+24	+148	-77	+136	+177	+50	+12	+77	-24	+32	+15	-21																	
26		-142	-56	-62	-65	-84	-145	-230	-41	+53	+83	+53	+12	-62	-186	-142	-150	-80	0	+32	+12	+77	+162	-53	-174	-50																	
27	X	-121	-100	-97	-86	-62	-97	-59	-56	0	+53	0	-18	-53	-88	-112	-88	-56	-56	-65	-27	-80	-21	+121	+100	-44																	
28		+32	-86	-201	-109	-97	-398	-204	-27	-12	+136	-77	-74	-53	-127	-139	-97	-65	-21	+103	+263	-38	-50	-35	+177	-50																	
29		+30	-124	-86	-100	-142	-94	-83	+24	0	-30	+136	+24	-97	-162	-56	-124	-56	-47	+56	-118	-59	-77	+53	-27	-48																	
30		+12	-59	-94	-86	-186	-142	-88	-30	+35	+103	+112	+18	-195	-250	-209	-201	-206	-30	+24	+115	-53	-88	-56	-94	-68																	
MEANS ALL DAYS		-11	-129	-102	-122	-110	-101	-99	+15	+45	+50	+41	-42	-98	-67	-54	-87	-107	-56	-11	+26	+6	+3	-36	-57	-46																	
MEANS 10 DAYS		-58	-88	-105	-94	-94	-118	-76	+7	+58	+108	+58	-52	-108	-106	-123	-130	-103	-60	-41	-14	-17	-24	-48	-40	-54																	

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 77

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DECEMBER 1932

DECEMBER 1932

COMPONENT NORTHERLY										LINE OM		LENGTH IN KMS					56.8					DIRECTION N 19°.5 E					
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN	
1	X	-138	-129	-181	-263	+82	-73	-95	-26	+78	+39	+22	-112	-250	-289	-224	-293	-103	+43	-13	+43	-125	-43	-91	-99	-93	
2	X	-142	-164	-177	-78	-155	-164	-82	-172	-134	-172	-95	-95	-22	-280	-159	-82	-56	+47	+26	+43	0	-121	-129	-116	-103	
3		-129	-129	-34	-43	-181	-86	-138	-86	-34	-34	-43	-103	-138	-43	-168	-220	-26	+17	+138	+78	-30	-254	-211	-164	-86	
4	X	-211	-190	-138	-302	-91	-177	-138	-129	+43	+17	-43	-172	-207	-233	-259	-194	-47	0	-43	-43	-34	+52	-121	-172	-118	
5	X	-177	-164	-164	-216	-159	-134	-86	-60	-43	0	-47	-91	-116	-168	-91	-125	-86	+13	-26	-103	-121	-86	-142	-108	-104	
6	X	-138	-121	-82	-47	-116	-207	-172	-190	-159	-30	-43	-168	-134	-155	-34	+30	-22	-52	-43	-43	-34	-86	+30	-125	-89	
7		-129	-129	-155	-168	-134	-134	-207	-194	-43	+86	+43	-116	-168	-125	-125	-125	-91	-56	-86	-78	-43	+34	+366	+401	-57	
8		-159	-431	-263	-82	+164	-150	-319	-237	-159	-159	+60	-56	-86	-323	-172	-22	+129	+465	+224	+13	-207	-241	+17	-150	-89	
9		-552	-517	-56	-142	-267	-267	-237	+142	-125	+95	+177	+34	+13	+95	-318	-227	-39	+172	+149	-114	-196	-118	-125	-227	-110	
10		-282	-74	-86	-157	-196	-184	-427	0	+169	+204	+98	+74	-274	-333	-208	-114	-31	-118	-153	-192	-223	-310	-314	-333	-144	
11	X	-243	-204	+204	+67	-78	-67	-39	+31	+192	+161	+20	-180	-196	-200	-82	-114	+67	+86	+55	+43	-153	+20	-35	-302	-39	
12		-74	-212	-306	+71	-74	-35	-78	-82	+39	+47	-55	-184	-306	-263	-137	-35	+12	+39	-31	0	+27	+12	-74	-165	-78	
13		-227	-274	-153	-161	-184	-94	-286	-129	-208	+157	+184	-333	-231	-149	+43	-106	+98	+47	+86	-71	-43	-35	-118	-223	-100	
14		-231	-200	-188	-204	-102	-588	-71	+372	+353	+216	-862	+227	+600	+274	+227	+525	+368	+588	+172	+235	+39	-282	-282	-439	+31	
15		-247	-580	-165	-20	-439	-243	-231	-447	-172	-122	-204	+274	+325	+47	+90	-12	-43	+325	+337	-169	+149	-220	-31	-302	-88	
16		-247	-255	-184	-474	-165	-86	+102	0	0	+114	-145	-325	+31	+122	+204	-153	+78	+196	+71	+16	+43	-12	+35	-98	-47	
17		-157	-506	+172	-439	-90	-318	-545	-196	+114	-149	+243	+321	+145	-270	-188	-90	+31	+39	+43	+329	-90	+78	-165	+24	-69	
18		-506	-223	+118	-329	-161	-39	-314	+27	+94	+74	+86	+71	-78	-208	-321	-227	-27	+82	+43	+125	-118	-114	-24	-114	-87	
19		-110	-392	+86	-106	-78	+31	-278	-227	+188	+133	+78	+157	+39	-31	-412	-259	+8	+86	+220	-153	-35	+12	-47	-82	-49	
20	X	-235	-122	-306	-59	-129	-157	-169	-110	-39	+39	+122	+67	-71	-235	-227	-251	-129	-27	+74	-43	-149	-110	-122	-118	-104	
21	X	-106	-157	+16	-102	-157	-153	-125	-122	-47	0	+16	-24	-67	-125	-180	-188	-106	0	-51	-31	+24	-169	-145	-114	-88	
22		-137	-110	-78	-129	-176	+294	+78	-8	+102	+43	+94	-59	+20	-86	-208	-129	-39	-35	-12	+31	+27	-118	-153	-153	-39	
23	X	-180	-86	-67	-188	-51	-122	-118	-122	-71	+27	+43	-74	-196	-161	-47	-184	-90	+35	-31	0	-74	-161	-137	-153	-92	
24	X	-145	-137	-192	-274	-78	-78	-125	-149	-86	-35	+16	-114	-145	-47	-231	-165	-71	-39	-24	-35	-82	-145	-192	-204	-116	
25		-86	-35	-470	+35	+20	-118	-51	-294	-157	-98	+20	-78	-47	+149	-39	-149	-98	+239	+188	-27	-118	+63	-153	-188	-62	
26		-223	-188	-106	-118	-110	-125	-227	-157	-290	-57	+125	+600	+94	-172	-235	-78	-125	..
27		-263	-184	+94	-227	-110	-325	-165	-63	-39	+137	-27	-110	-153	-141	-270	-243	-82	-12	-27	+27	-71	-78	-122	-90	-106	
28		-82	-192	-227	-114	-208	-188	-255	+27	+94	-39	-39	+39	-365	-220	-106	-231	-122	+55	+78	+24	+12	-114	-114	-169	-102	
29		-122	-169	-102	-141	-78	-129	-227	-59	-35	+35	+78	-78	-188	-235	-345	-227	-82	-74	-67	+27	-24	-16	-47	0	-96	
30		-196	-39	-153	-114	-267	-196	-157	-106	-63	+67	+51	-39	+35	-517	-274	-24	-39	+149	-82	+12	+35	-51	-161	+129	-83	
31		-451	+39	-263	-137	-184	-247	-161	-133	-137	-39	+157	+39	-53	-274	-423	-263	+176	-20	+43	+12	+169	-94	-118	-169	-105	
MEANS		-103	-203	-117	-151	-128	-147	-171	-91	-10	+27	0	-40	-76	-147	-156	-130	-15	+76	+42	-1	-45	-90	-98	-134	-84	
ALL DAYS																											
MEANS 10 DAYS		-172	-147	-109	-146	-93	-133	-115	-105	-27	+5	+1	-96	-140	-189	-153	-157	-64	+11	-8	-17	-75	-85	-108	-151	-95	

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1932

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1932

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										93.9 DIRECTION E 0°.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	- 32	- 30	-227	-168	- 18	- 9	- 68	- 71	- 24	+121	+ 88	+242	+ 30	-139	-218	-313	-145	- 35	- 9	- 18	- 88	0	- 12	- 24	- 49							
2	X	- 80	-112	- 97	- 56	- 86	-139	- 83	-171	-171	-180	- 59	+115	+351	- 77	-171	-145	-168	- 59	+ 24	+ 65	+ 35	- 80	- 83	- 35	- 61							
3		- 68	- 88	- 21	- 15	-162	- 32	-115	-136	- 86	- 24	+ 24	+ 35	+ 77	+112	-103	-127	- 35	+ 44	+133	+139	- 30	-162	-124	- 56	- 34							
4	X	-121	-121	-109	-195	- 88	- 80	-112	-174	- 56	- 38	+ 53	+ 9	+ 21	- 80	-159	-148	- 86	- 32	- 59	- 24	+ 68	+ 6	+ 32	- 86	- 66							
5	X	- 86	- 88	-112	-136	-112	- 88	- 56	- 38	- 65	0	- 27	+ 30	+ 24	- 32	+ 6	- 68	-153	- 56	- 83	-109	- 62	- 27	- 83	+ 18	- 58							
6	X	- 59	- 68	- 50	- 68	- 32	-124	-156	-171	-145	- 12	0	- 32	+ 32	- 30	+ 22	+ 59	- 35	-174	- 86	- 12	+ 6	- 30	+ 32	- 68	- 50							
7		-112	-109	-127	-133	-103	- 88	-174	-221	-112	+ 56	+ 88	0	- 9	- 18	- 65	-115	-115	- 91	-103	- 59	+ 35	+127	+560	+428	- 19							
8		-139	-378	-206	-106	+201	-183	-354	-313	-215	-248	+112	+ 27	+ 59	-192	- 44	+ 97	+236	+581	+280	+ 41	-192	- 83	+ 74	-159	- 46							
9		-142	-295	+ 18	- 88	-156	-127	-236	+100	+ 15	+ 21	+121	+145	+180	+260	-258	-255	- 82	-175	+ 30	- 60	- 79	- 38	- 58	-137	- 54							
10		-255	+ 25	- 47	- 88	-156	-107	- 66	-192	+145	+ 90	+192	+279	+ 33	-145	-206	-159	-151	- 74	- 11	- 8	+ 25	- 49	-101	-107	- 47							
11	X	- 74	- 79	- 36	- 49	-118	- 74	-112	- 93	- 22	+134	+107	+ 19	- 33	-101	- 85	-269	- 99	0	+ 33	+ 52	+153	+ 77	+ 52	-184	- 33							
12		- 77	- 82	-252	+ 19	- 82	- 49	- 58	- 77	- 8	+ 22	- 27	- 27	- 74	- 90	-115	- 82	- 63	- 8	- 47	+ 52	+ 58	+ 79	+ 55	- 11	- 39							
13		- 60	-156	- 30	- 47	-112	- 33	-181	- 85	-142	+195	+342	-159	- 52	+ 25	+191	- 63	- 25	- 74	+ 77	+ 27	+153	+ 49	- 52	-156	- 16							
14		- 99	-142	-206	-296	+170	-603	+151	+258	+186	+822	-200	+186	+622	+373	+510	+348	+255	+342	+104	+ 52	-121	-173	-142	-304	+ 87							
15		-164	-364	-323	+ 38	-195	-189	- 63	-337	-222	- 63	+ 74	+603	+732	+323	+241	+ 66	-118	+329	-400	-211	+ 49	-164	- 74	-159	- 25							
16		-227	-200	-184	-326	-216	-373	- 63	-134	- 85	+310	+ 47	-175	+170	+219	+266	-192	+ 19	+142	- 74	- 22	+ 60	- 19	+ 55	- 52	- 44							
17		-142	-364	+ 88	-167	- 49	-216	-515	-178	+274	-186	+107	+403	+351	-249	- 79	-112	+225	0	+ 25	+115	+ 58	+260	-142	+ 22	- 20							
18		-395	-167	+ 14	-134	-200	- 36	-142	-206	- 36	+ 11	+156	+222	+ 88	- 74	-241	-225	- 96	+ 27	+ 52	+ 77	- 25	- 60	+ 52	- 58	- 58							
19		- 25	-329	+ 47	- 60	-115	- 55	- 44	-227	+ 25	+ 14	+ 88	+274	+296	+288	-406	-356	-142	+ 25	+112	- 77	- 11	+ 52	+ 38	+ 30	- 23							
20	X	-156	- 49	-137	-107	-107	-110	-137	-121	- 27	- 22	+ 79	+107	+123	- 19	- 82	-162	-142	- 30	+118	- 11	-162	- 22	- 38	- 49	- 53							
21	X	- 55	- 77	+ 27	- 27	- 96	-129	- 74	-129	-118	- 58	- 27	+ 27	+ 82	+ 36	- 55	- 90	- 96	- 27	- 33	+ 49	+ 52	- 85	- 77	- 25	- 42							
22		- 47	- 68	+ 52	- 52	- 77	- 60	- 55	- 85	- 27	+ 30	+112	+ 58	+184	+ 8	-186	-173	-107	- 60	0	+ 58	+ 79	- 36	- 79	- 44	- 24							
23	X	- 88	+ 14	- 25	-175	+ 25	- 52	- 25	- 90	-107	- 8	+ 60	+123	- 22	+ 19	- 19	-189	-112	+ 58	+ 14	+ 30	- 25	- 82	- 58	- 79	- 33							
24	X	- 41	- 41	-140	-252	- 60	- 63	- 88	- 66	- 55	- 47	+ 79	+ 90	+ 27	+ 36	-175	-153	- 90	- 68	+ 11	+ 49	0	- 30	-115	-156	- 56							
25		+ 14	+ 85	-342	- 77	+118	- 30	+ 27	-162	-186	-137	+112	+142	+197	+337	- 93	-178	- 52	+206	+236	- 11	-104	+110	- 22	-134	+ 2							
26		-126	-115	- 60	- 85	- 79	- 52	-186	-189	-285	-142	+ 52	+616	+227	-197	-211	+ 47	+ 19	..						
27		-233	- 90	+ 90	-132	- 30	-167	-132	- 41	- 77	+ 77	+110	+129	+ 90	- 27	-164	-214	-181	-110	- 47	+ 71	0	- 25	- 30	- 47	- 49							
28		+ 30	-121	-137	- 77	-145	-170	-142	+134	-115	-115	+129	+310	-123	- 71	+ 33	-310	-173	- 30	+ 60	+ 36	+ 66	+ 14	- 14	- 77	- 42							
29		- 27	- 99	- 36	- 93	- 49	- 85	-192	-126	- 55	+ 11	+175	+170	+140	- 11	-233	-219	-186	-118	- 49	- 25	+ 19	+ 58	0	+ 88	- 39							
30		-132	+ 74	- 22	- 77	-189	-173	-142	-142	- 33	+ 79	+162	+206	+321	-241	-225	- 52	-118	+181	-189	+ 49	+ 77	-104	- 47	+222	- 21							
31		-493	+129	-251	-115	-123	-197	-178	-132	-153	-101	+211	+392	+296	+ 22	-321	-315	- 36	- 49	+ 41	- 22	+ 63	-129	+ 68	- 93	- 62							
MEANS ALL DAYS		-120	-113	- 93	-109	- 79	-128	-120	-114	- 57	+ 25	+ 83	+132	+140	+ 15	- 81	-137	- 69	+ 22	+ 5	+ 10	+ 5	- 18	- 11	- 50	- 36							
MEANS 10 DAYS		- 79	- 65	- 91	-123	- 69	- 87	- 91	-112	- 78	- 11	+ 35	+ 73	+ 64	- 39	- 93	-148	-113	- 42	- 7	+ 7	- 2	- 27	- 35	- 68	- 50							

TABLE 79

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LINE		LENGTH IN KMS										DIRECTION										N 19° 5' E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN															
1		-156	-196	-371	-98	-152	-196	-164	-121	+86	+246	+215	+47	+129	-379	-586	-227	-105	+43	+325	-196	-125	-117	-74	-86	-94															
2		-47	-391	-109	-121	-231	-235	-207	-137	0	+156	+223	+168	-31	-242	-438	-364	-152	+20	+90	-188	-35	-16	-199	-117	-108															
3	X	-117	-129	-196	-196	-223	-156	-203	-152	-39	+149	+196	+125	+16	-246	-461	-321	-145	0	-160	-94	-106	-86	-133	-106	-116															
4	X	-117	-129	-117	-152	-129	-164	-94	-98	-70	+106	+164	+86	-106	-270	-438	-348	-82	-12	-78	-70	-66	-70	-125	-121	-104															
5	X	-152	-106	-113	-164	-203	-188	-199	-82	+35	+66	+86	-70	-129	-184	-246	-203	-196	-109	-78	-70	-51	+137	+235	+39	-81															
6		-309	-109	-274	-39	-16	-274	-274	-145	-74	+172	+282	+207	+121	-223	-285	-215	+102	-12	-90	-35	+78	-313	-196	-192	-88															
7		-192	-196	-184	-184	-160	-156	-188	-66	+86	+332	0	-235	-246	-121	-168	-156	-78	-70	-20	-20	-12	-242	-78	-160	-105															
8	X	-360	-59	-176	-121	-188	-356	-196	-4	+82	+196	+109	-239	-321	-192	-188	-90	-74	+16	+8	+23	-43	-51	-117	-203	-107															
9	X	-188	-211	-192	-196	-164	-235	-215	-102	+145	+207	+125	-313	-387	-196	-164	-125	+12	+31	+12	-31	-39	-78	-184	-192	-112															
10	X	-196	-184	-160	-156	-109	-90	-109	-102	+31	+90	+47	-235	-274	-199	-113	-203	-74	+43	+16	+8	-43	-113	-121	-156	-100															
11	X	-203	-168	-152	-125	-207	-188	-152	-129	-82	+51	+20	-109	-278	-282	-211	-196	-31	+86	-12	-86	-117	-125	-168	-176	-127															
12	X	-188	-196	-184	-125	-180	-156	-164	-109	-12	+16	+39	-129	-282	-156	-227	-207	-43	+39	+43	-31	-74	-102	-78	-145	-110															
13	X	-149	-172	-223	-125	-160	-199	-172	-176	+20	+231	+235	-149	-497	-516	-391	-160	+43	+47	+78	+12	-70	-109	-152	-188	-123															
14		-156	-192	-137	-125	-117	-113	-98	-27	+137	+156	-98	-540	-598	-463	-149	-39	-12	+90	+270	+156	+70	+387	+841	-113	-36															
15		+82	-528	-156	-414	-242	-309	-227	-164	+90	+188	-35	-360	-508	-422	-16	-203	-39	+70	+152	+113	-270	-156	0	-172	-147															
16		-352	-12	-39	-168	-317	-309	-16	-20	+156	+305	+66	-383	-512	-418	-282	-156	-74	-31	-74	-39	-31	-74	-117	-156	-127															
17		-192	-547	-242	+51	-47	-305	-102	0	+121	+321	+223	-313	-520	-430	-180	-20	+82	+78	+35	+27	+90	+117	-117	-86	-82															
18		-152	-149	-293	-219	-117	-98	-94	+27	+344	+344	+106	-278	-438	-500	-321	-121	+16	-102	-59	-12	+47	-39	-125	+47	-91															
19		-51	-188	-156	-227	-235	-74	-293	-239	+176	-164	+223	-317	-454	-379	-51	+164	+242	+156	+168	-207	+176	+173	-184	-418	-48															
20		-325	-391	-383	-262	-325	-164	-117	-78	+90	+160	-27	-387	-379	-344	-207	-149	+39	-102	-106	-109	-102	-109	+192	-94	-153															
21		-113	-125	-188	-117	+31	-59	0	+43	+47	+184	+137	-246	-356	-227	-235	-109	+94	+51	+12	-74	+78	-70	-70	+313	-45															
22		+168	-254	-266	-188	-149	-196	-125	-8	-313	+156	+497	-59	-360	-149	-39	-125	+106	+199	+43	-121	-82	0	+129	-39	-49															
23		-368	-164	-227	+78	-192	-127	-113	-254	-66	+39	+31	-332	-352	-504	..	..	..	..	..	..	..	..	..	..	..				
24		..	..	..	..	..	..	..	..	..	..	..	-313	-356	-454	-282	-152	+43	+78	+266	-113	-27	-172	-196	-35	..				
25		-70	-203	-86	-27	-117	-121	+31	-289	-39	+20	-282	-270	-344	-47	-98	+109	+31	+66	-35	+868	-430	-78	-141	-188	-72															
26		-239	-227	-301	-51	-172	-20	-74	-227	+66	-121	+137	-137	-223	-278	-250	-282	+55	+379	-23	-129	+70	-231	-172	-145	-108															
27		-149	-149	-31	-497	+117	-43	-109	-78	-20	+39	+227	-657	-192	-211	-192	-137	+258	-55	+43	+418	-223	-309	-188	-207	-98															
28		-168	-149	-121	-242	-239	+16	+8	-31	+469	-39	+78	-262	-590	-481	-352	-141	+305	-82	+152	-109	-152	-239	-133	-156	-111															
29		-231	-219	-325	-117	-66	-321	-274	+70	+129	-176	+43	-239	-282	-117	-227	-215	-121	-78	+121	+184	-35	-145	-207	-156	-125															
30		-168	-109	-196	-297	-98	-82	-39	-35	0	+102	+109	-125	-317	-274	-86	-375	-133	+43	+31	-106	-113	-78	-78	-113	-106															
31	X	-344	-113	-55	-223	-47	-47	-51	+149	+203	+235	+39	-426	-442	-262	-203	-266	-141	-86	-51	-70	-82	-74	-94	-86	-106															
MEANS ALL DAYS		-167	-200	-187	-170	-147	-167	-135	+83	+64	+129	+110	-202	-303	-283	-235	-168	-4	+24	+28	0	-58	-42	-64	-123	-99															
MEANS 10 DAYS		-201	-147	-157	-158	-161	-178	-156	-80	+31	+135	+106	-146	-270	-250	-264	-212	-73	+2	-22	-41	-89	-67	-94	-134	-109															

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 76	- 85	-199	- 87	- 82	-177	-169	-128	- 52	+186	+319	+341	+710	-104	-505	-369	-246	- 22	+229	- 60	- 85	- 76	+ 30	- 55	- 32
2		- 27	-284	+ 33	- 60	- 38	-104	-169	-145	- 52	- 16	+186	+483	+251	- 82	-259	-407	-213	- 35	- 68	- 30	- 22	+ 55	-128	- 74	- 50
3	X	- 35	- 30	-131	-147	-150	-112	-131	-150	- 85	+ 57	+207	+229	+188	-101	-306	-169	-101	- 8	-128	- 74	- 57	- 25	- 76	- 16	- 59
4	X	- 52	- 71	- 74	-112	-104	- 90	- 68	- 33	- 82	+ 76	+224	+246	-134	-104	-219	-308	-131	- 30	- 38	- 16	+ 11	- 8	- 60	- 60	- 56
5	X	-115	- 19	- 44	-104	-136	-138	-139	- 71	- 25	+ 8	+ 85	+ 55	+ 55	- 22	- 87	-153	-216	-136	- 76	- 49	+ 76	+238	+535	- 55	- 22
6		-273	- 49	-177	-300	+ 22	- 25	+ 85	-251	-295	+ 44	+216	+365	+293	- 55	-128	- 87	+169	+ 30	- 79	+ 33	+ 33	-153	-104	-106	- 33
7		- 63	- 57	- 55	- 60	- 27	- 63	- 55	- 41	- 55	+360	+213	-109	-120	- 63	- 79	- 79	- 30	- 55	+ 44	+ 33	+ 74	+156	+ 22	- 30	- 17
8	X	-298	- 44	- 87	-109	- 27	-240	-156	- 44	- 25	+126	+281	+ 49	-112	-115	-172	- 76	-101	+ 8	+ 60	+ 82	+ 52	+ 63	- 71	- 74	- 43
9	X	- 57	-131	-128	-136	-115	-156	-161	-134	+ 33	+238	+270	+ 46	-128	- 49	-167	-193	- 55	+ 25	+ 41	+ 52	+ 33	+ 22	- 46	- 87	- 41
10	X	- 85	- 82	- 87	- 93	- 76	- 57	- 52	- 96	- 52	+ 93	+243	+ 55	- 79	-123	-106	-191	- 79	+ 11	+ 55	+ 55	+ 44	- 11	- 35	- 74	- 34
11	X	-117	- 87	-136	- 71	-150	-167	-139	- 82	- 71	+ 27	+101	+150	- 8	-158	-227	-281	- 87	+ 60	+ 25	- 22	- 52	- 41	- 79	- 79	- 70
12	X	- 92	-101	- 79	- 60	-134	-128	-145	-106	- 49	- 87	+109	+101	- 63	- 82	-115	-128	- 41	+ 27	+ 60	+ 19	- 11	- 5	+ 22	- 79	- 48
13	X	+ 22	- 87	-142	- 82	- 90	-131	-104	-104	- 27	+136	+330	+197	-164	-292	-278	-188	- 52	+ 30	+ 82	+ 46	- 33	- 27	- 49	- 87	- 46
14		- 63	- 82	- 60	- 79	- 82	- 76	- 35	- 60	+ 49	+106	+106	- 90	-349	-273	- 71	+ 27	- 22	- 22	+199	+175	+109	+571	+538	+199	+ 28
15		+ 76	-191	+ 60	-246	-150	-199	-188	-106	+ 46	+251	+254	- 49	-254	-349	+ 60	-349	-142	+ 85	+136	+ 55	-197	- 87	+ 68	- 27	- 60
16		-199	- 33	+ 35	- 68	-240	-109	- 66	- 96	+136	+202	+349	-112	-333	-333	-278	-207	-106	+ 16	- 30	- 27	+ 68	+ 30	- 0	- 25	- 59
17		- 16	-268	-186	+131	- 11	-106	- 96	- 71	+ 11	+224	+401	+ 52	-268	-240	-186	-109	- 30	- 22	- 0	+ 19	+ 60	+ 85	- 52	- 8	- 29
18		- 74	- 79	-115	-221	- 85	- 82	-117	- 82	+ 96	+243	+300	+ 82	- 82	-229	-265	-243	-150	- 79	- 25	+ 41	+ 76	+ 87	- 55	+205	- 36
19		+ 79	-164	- 87	-164	-172	- 57	-169	-161	+115	- 68	+227	+ 19	-169	-268	- 82	+ 74	+161	+202	+106	-169	+303	+792	+213	-358	+ 8
20		- 63	-224	-333	-145	-213	-197	-117	- 93	- 11	+188	+191	- 27	-109	-227	-238	-216	- 22	- 74	- 52	- 41	- 22	- 33	+ 8	- 85	- 90
21		- 87	- 57	- 82	- 87	-153	- 76	- 27	-123	- 85	+106	+224	- 16	-104	-156	-293	-213	+ 14	+ 71	+ 57	- 46	+104	+ 22	- 52	+595	- 20
22		+191	-213	-188	-164	-115	-188	-145	-161	-120	+115	+669	+262	- 63	- 60	+150	-158	- 82	+186	-104	-251	- 63	+ 52	+112	+205	- 6
23		-240	-117	-145	+ 16	-136	-136	-131	-156	-251	+ 90	+240	+ 60	+ 27	-390	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	- 57	- 44	-251	-268	-227	- 60	+ 79	+ 68	+ 46	+ 14	-115	-134	+ 49	..
25		+ 33	-172	-109	- 60	-101	-188	- 0	-123	-147	+ 63	- 22	- 49	-115	- 55	- 79	+ 46	+ 60	- 33	- 33	+614	-213	- 25	- 49	-117	- 36
26		-101	-186	-265	-153	-153	- 68	- 49	- 82	+ 60	- 63	+328	+ 55	+ 82	-153	-240	-314	+ 93	+429	-150	-131	+117	-429	+191	-104	- 54
27		- 55	- 79	- 41	-319	+ 22	- 49	-128	- 98	- 46	+246	+642	-254	+177	-224	-322	-259	+ 74	+ 35	+ 46	+360	-188	-197	- 90	-142	- 40
28		-123	- 79	+ 33	-199	-115	- 27	+ 60	-177	+410	+232	+415	+227	-319	-358	-251	- 87	- 96	-104	+104	-218	-169	-145	+ 35	+ 16	- 39
29		- 76	- 87	-207	+ 16	+ 33	- 35	-141	+ 8	+199	+ 16	+319	+ 14	- 0	+101	-224	-235	-216	-106	+126	+328	- 41	- 22	-161	- 19	- 19
30		-109	- 32	- 74	-254	- 57	- 35	-104	- 55	+ 68	+109	+172	+ 98	- 22	+ 90	+131	-336	-295	- 66	-158	- 46	-109	- 49	+ 49	+ 68	- 42
31	X	-205	- 41	- 0	-106	- 60	- 27	- 22	+ 55	- 19	+322	+306	- 57	- 87	- 49	- 49	-273	-227	-134	- 71	- 76	- 68	- 49	- 66	- 57	- 44
MEANS	ALL DAYS	- 71	-109	-101	-122	- 95	-107	- 98	- 97	- 3	+122	+264	+ 81	- 46	-143	-172	-189	- 75	+ 8	+ 12	+ 23	- 6	+ 17	+ 22	- 18	- 38
MEANS	0 DAYS	-102	- 75	- 91	-102	-104	-124	-112	- 76	- 40	+100	+216	+107	- 53	-110	-183	-197	-109	-15	+ 1	+ 2	- 0	+ 16	+ 8	- 67	- 46

TABLE 81

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-121	-121	-117	-121	-78	-39	+8	+125	+203	+343	+43	-261	-437	-425	-347	-203	-172	-47	-129	-144	-70	+90	+74	-90	-85
2		+82	-136	-66	-234	-214	-242	-152	+136	+117	-168	+74	+31	-156	-277	-351	-308	-109	+12	-66	-86	-129	-109	-148	-125	-109
3	X	-125	-156	-187	-203	-82	-86	-74	+39	+160	+27	+39	-191	-261	-269	-246	-176	-74	-187	-66	-105	-74	-86	-117	-152	-110
4		-113	-70	-125	-39	-160	-117	-199	-179	-121	-129	-191	-86	-156	-121	-125	-152	-66	+43	+90	+347	-43	-172	-187	-152	-93
5		-195	-199	-191	-242	-187	-211	-156	-101	-117	-164	-195	-113	-136	-86	-156	-117	-121	-74	+35	+12	-86	-105	-156	-148	-134
6		-164	-168	-125	-125	-129	-117	-133	-39	-113	-121	-47	-74	-136	-164	-211	-277	-281	-199	-86	-101	-31	+27	-82	-109	-125
7		-90	-234	-191	-332	+90	-66	-47	+129	-12	-39	-121	-187	-374	-269	-207	+43	+31	+35	0	-39	-82	0	-117	-160	-93
8		-43	-113	+16	-187	-187	-187	-148	-152	+31	+74	-20	-203	-351	-148	-234	-98	-43	-47	-20	+199	-31	+121	+35	-125	-78
9	X	-261	-402	-78	-179	-168	-117	-156	-90	-164	-105	-82	-129	-199	-90	-82	-140	-109	-70	-74	+39	-62	-160	-168	-113	-132
10	X	-156	-164	-156	-168	-176	-117	-86	-70	-136	-187	-273	-370	-363	-238	-66	+35	+121	+23	-8	-23	-47	-105	-113	-160	-125
11	X	-191	-183	-179	-156	-148	-117	-144	-27	+117	+125	-31	-203	-394	-488	-335	-164	-31	+35	-117	+20	-51	-121	-121	-156	-128
12	X	-125	-129	-156	-101	-242	-74	-43	-47	+113	+82	-113	-320	-382	-304	-125	-8	+39	-43	-86	-66	-82	-105	-121	-152	-108
13	X	-195	-164	-203	-156	-129	-74	-43	+58	+164	+121	+70	-117	-238	-308	-320	-339	-148	-74	-70	-86	-62	-113	-121	-136	-112
14		-312	-43	-160	-168	+31	-332	-390	-20	-39	+58	-82	-160	-273	-156	-296	-16	+125	+47	-8	-82	-39	+78	-109	-164	-105
15		-199	-273	+23	-226	-43	-176	-94	-234	-246	-421	-382	-39	-31	-39	+144	+47	-8	-39	-82	-74	-78	-82	-82	-117	-115
16	X	-113	-70	-164	-117	-156	-148	-113	+66	-16	-164	-308	-304	-195	-152	-144	-39	-74	-47	-39	-86	-98	-105	-121	-121	-118
17	X	-121	-144	-117	-125	-152	-39	+31	+51	-47	-230	-292	-269	-226	-191	-86	-39	-78	-160	-90	-78	-78	-90	-90	-109	-115
18		-113	-117	-176	-152	-109	-152	-86	-70	-125	-98	-117	-113	-117	-125	-58	-203	-66	-70	-12	+148	-230	-125	-98	-51	-101
19		-86	-183	-265	+136	-78	+101	+168	-250	-722	-445	+129	+398	+39	+109	-35	+105	+1092	-109	+176	-480	-226	-226	-234	-109	-41
20		-129	-39	-628	-218	-58	-573	+156	-109	-421	-207	-230	-109	-133	-51	+90	+82	+523	-230	-78	+277	+663	-207	-608	-320	-107
21		-273	-125	-296	-265	+156	-246	-172	-156	-733	-133	-332	-39	-78	+31	+218	+515	-164	+800	-273	+105	-109	-367	-82	-47	-86
22		-655	-343	+43	-16	-281	+86	-109	-43	-117	-534	-31	+51	-402	-70	-39	+152	+410	-347	-117	+456	-339	-246	-234	-86	-117
23		-546	+265	-39	-183	-109	0	-39	-113	+203	+39	-554	-507	+43	+47	+168	-47	+343	-273	-125	-70	+12	-390	-140	-152	-90
24		-230	+472	-495	-70	-644	+265	+125	+234	-234	-86	-164	-499	-437	-164	+312	+129	-207	+31	-35	+78	-195	-31	-140	-109	-87
25		-534	-347	+82	-573	+242	+312	+27	-86	-234	-234	-320	-144	-468	-410	+70	+195	+121	+148	+480	+250	-35	-363	-195	-222	-93
26		-203	-304	-214	-320	-90	+35	+98	+148	+47	-226	-410	-476	-390	-172	+640	-164	-125	-74	-35	+261	-152	-47	-308	-413	-121
27		-35	-117	-113	-109	-214	+117	+86	+289	+246	-16	-273	-476	-554	-374	-78	-39	+35	-148	-70	-47	-129	-148	-113	-109	-100
28	X	-152	-304	-121	-78	-105	-82	+78	+269	+238	-27	-335	-468	-499	-398	-355	-113	-39	-78	+39	+51	+8	-129	-109	-117	-118
MEANS ALL DAYS		-193	-140	-157	-169	-122	-86	-57	-9	-70	-102	-162	-132	-261	-189	-80	-48	+33	-41	-31	+24	-67	-118	-143	-144	-105
MEANS 10 DAYS		-156	-184	-148	-140	-144	-89	-54	+37	+63	-2	-128	-263	-319	-286	-211	-119	-56	-65	-64	-48	-62	-92	-101	-131	-115

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON		LENGTH IN KMS										93.9 DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24									
1	X	- 38	- 25	+ 16	- 19	- 35	- 19	- 8	+ 22	+ 27	+ 227	+ 278	+ 117	- 142	- 207	- 194	- 145	- 213	- 120	- 164	- 156	+ 68	+ 169	+ 186	- 205	- 24								
2		+ 46	- 115	+ 16	- 126	- 197	- 126	- 218	- 93	+ 85	+ 27	+ 139	+ 145	+ 150	- 46	- 191	- 270	- 172	- 46	- 44	- 49	- 68	- 52	- 82	- 56									
3	X	- 52	- 60	- 82	- 104	- 55	- 55	- 117	- 63	- 19	+ 30	+ 191	+ 79	- 27	- 112	- 169	- 60	- 55	- 246	- 63	- 104	- 46	- 44	- 57	- 74	- 57								
4		- 68	- 25	- 161	+ 27	- 79	- 82	- 142	- 183	- 213	- 131	- 44	+ 145	+ 79	+ 63	- 27	- 142	- 87	+ 49	+ 134	+ 325	+ 117	- 134	- 87	- 183	- 35								
5		- 41	- 101	- 123	- 172	- 115	- 172	- 158	- 153	- 199	- 188	- 87	- 8	+ 8	+ 57	- 49	- 52	- 52	+ 5	+ 104	+ 76	- 19	+ 52	- 44	- 30	- 61								
6		- 49	- 71	- 46	- 8	- 30	- 8	- 30	- 5	- 8	+ 19	+ 191	+ 169	+ 55	- 85	- 254	- 360	- 300	- 169	+ 14	- 16	+ 134	+ 82	+ 22	+ 30	- 30								
7		+ 44	- 161	- 101	- 322	+ 22	- 22	+ 52	+ 68	- 25	+ 57	+ 115	+ 46	- 227	- 224	- 248	+ 41	+ 76	+ 55	+ 35	+ 22	- 16	+ 104	- 19	- 79	- 29								
8		+ 74	- 16	+ 22	- 126	- 131	- 186	- 147	- 164	0	+ 177	+ 243	+ 55	- 136	- 63	- 224	- 126	- 85	- 30	+ 82	+ 156	+ 115	+ 246	+ 142	- 87	- 19								
9	X	- 194	- 295	- 52	- 123	- 128	- 87	- 117	- 147	- 156	- 52	+ 52	+ 96	+ 16	+ 49	+ 76	- 76	- 82	- 52	- 55	- 46	+ 101	- 82	- 136	- 35	- 64								
10	X	- 71	- 74	- 112	- 109	- 134	- 79	- 52	- 71	- 60	- 112	- 93	- 120	- 164	- 145	- 52	- 22	+ 109	+ 82	+ 41	+ 25	+ 8	- 25	- 55	- 87	- 57								
11	X	- 134	- 109	- 112	- 115	- 104	- 79	- 115	- 55	+ 93	+ 158	+ 167	+ 35	- 156	- 306	- 262	- 164	- 33	+ 27	- 134	+ 76	+ 27	- 30	- 33	- 76	- 60								
12	X	- 22	- 35	- 106	+ 46	- 142	- 76	+ 11	- 8	+ 87	+ 153	+ 27	- 112	- 188	- 177	- 79	- 8	+ 25	- 14	- 55	- 27	- 25	- 25	- 60	- 57	- 36								
13	X	- 85	- 74	- 66	- 30	- 52	- 27	- 52	- 22	+ 85	+ 109	+ 134	+ 55	- 33	- 191	- 268	- 278	- 93	- 52	- 11	- 49	- 46	+ 8	- 11	- 27	- 45								
14		- 243	+ 85	- 30	- 145	+ 11	- 169	- 243	- 104	- 131	- 11	+ 101	+ 251	+ 243	- 82	- 396	- 82	+ 87	+ 55	+ 66	- 57	+ 8	+ 117	- 123	+ 35	- 32								
15		- 66	- 281	+ 115	- 145	- 104	- 90	- 145	- 268	- 115	- 142	- 248	- 22	+ 85	+ 136	+ 246	+ 76	- 16	- 22	- 57	- 44	+ 8	- 11	+ 8	- 27	- 47								
16	X	- 79	+ 16	- 76	- 49	- 131	- 117	- 106	+ 8	+ 27	- 35	- 106	- 131	- 60	- 55	- 87	- 16	+ 57	+ 104	+ 79	0	- 8	0	- 19	- 8	- 33								
17	X	- 25	- 41	- 38	- 57	- 63	0	+ 46	+ 14	- 44	- 142	- 142	- 76	- 52	- 139	- 49	+ 19	- 8	- 76	- 41	- 22	+ 19	+ 8	0	- 14	- 38								
18		- 30	- 60	- 96	- 106	- 52	- 87	- 63	- 49	- 63	- 52	+ 11	+ 106	+ 145	+ 27	- 27	- 158	+ 30	+ 22	+ 101	+ 156	- 197	- 126	- 55	+ 49	- 24								
19		- 199	- 109	- 205	+ 60	- 314	+ 109	+ 232	+ 218	- 347	- 197	+ 232	+ 732	+ 303	- 33	- 112	+ 273	+ 977	+ 224	- 128	- 161	- 186	- 251	- 183	- 66	+ 36								
20		- 68	- 52	- 601	+ 273	- 112	- 238	+ 35	- 131	- 123	- 186	- 172	+ 120	- 139	- 55	+ 117	+ 213	+ 595	- 117	- 33	+ 221	+ 792	- 87	- 360	- 254	- 15								
21		- 251	- 145	- 172	- 265	- 11	- 33	- 46	+ 298	- 311	- 306	- 374	+ 52	- 115	- 27	+ 303	+ 497	- 150	+ 669	- 49	+ 246	- 147	- 268	+ 63	+ 216	- 14								
22		- 456	- 273	+ 38	- 30	- 158	+ 22	0	+ 120	- 169	- 423	+ 210	+ 429	- 369	- 183	+ 52	+ 191	+ 251	- 330	- 71	+ 431	- 227	- 30	- 142	- 240	- 57								
23		- 186	+ 229	- 46	- 164	- 112	- 41	+ 123	+ 82	+ 333	+ 278	- 532	- 423	+ 175	+ 131	+ 401	+ 60	+ 431	- 410	- 180	- 76	- 55	- 344	- 35	- 128	- 20								
24		- 240	+ 363	- 131	- 128	- 221	+ 76	+ 145	+ 248	- 22	+ 145	+ 186	+ 27	- 450	- 169	+ 723	- 19	- 341	+ 35	- 104	+ 128	- 494	+ 317	- 49	- 87	- 3								
25		- 287	- 325	+ 101	- 336	- 52	+ 281	+ 16	- 46	- 131	- 177	- 147	+ 248	- 216	- 251	+ 186	+ 191	+ 199	- 254	- 197	+ 573	- 55	- 188	- 363	- 82	- 55								
26		+ 16	- 145	- 142	- 210	- 25	- 19	+ 33	+ 199	+ 60	- 57	- 177	- 224	- 150	+ 87	+ 682	- 238	- 243	- 76	- 57	- 14	- 52	+ 136	- 243	- 218	- 45								
27		+ 27	- 46	- 33	+ 8	- 169	+ 79	+ 63	+ 112	+ 251	+ 158	- 79	- 221	- 314	- 238	+ 35	- 22	+ 93	- 90	- 117	- 57	- 112	- 106	- 30	- 27	- 35								
28	X	- 74	- 164	- 79	- 52	- 106	- 76	+ 35	+ 128	+ 183	+ 55	- 27	- 142	- 150	- 210	- 257	- 71	- 79	- 68	+ 136	+ 85	- 49	- 115	- 52	- 33	- 49								
MEANS ALL DAYS		- 93	- 75	- 82	- 90	- 100	- 47	- 35	- 2	- 32	- 22	+ 2	+ 51	- 65	- 87	- 4	- 27	+ 33	- 30	- 27	+ 59	- 15	- 24	- 65	- 66	- 35								
MEANS 10 DAYS		- 77	- 86	- 71	- 61	- 95	- 62	- 48	- 13	+ 22	+ 39	+ 48	- 20	- 96	- 149	- 134	- 82	- 37	- 42	- 27	+ 22	+ 5	- 14	- 24	- 62	- 46								

* = 10 LEAST DISTURBED DAYS

TABLE 83

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-141	-199	-184	-168	-117	-35	+39	+102	+219	-66	-282	-426	-391	-325	-309	-266	-12	+31	-31	-16	-145	-137	-109	-90	-127
2	X	-160	-78	-66	-164	-196	-180	-12	+59	+35	-78	-227	-242	-305	-207	-215	-86	+39	+8	-86	-8	-66	-86	-94	-227	-110
3	X	-215	-74	-199	-78	-125	-145	+74	+27	-117	-145	-86	-199	-321	-289	-188	-35	+215	+12	-16	-27	+39	-188	-168	-125	-99
4	X	-121	-63	-39	-117	-47	-160	-39	+35	+70	-203	-457	-512	-469	-188	0	+90	+82	+20	+23	-20	-74	-66	-43	-66	-9
5	X	-246	-35	-117	-98	-90	-106	-55	+102	+39	-293	-418	-301	-215	-192	-39	-39	+27	+47	-31	-31	-82	-121	-121	-164	-111
6	X	-149	-133	-66	-164	-70	-125	-47	+172	+82	-43	-309	-297	-239	-278	-172	-74	-78	-51	-43	-74	-117	-164	-121	-149	-113
7	X	-152	-125	-125	-160	-78	-137	-47	+239	+231	+129	-188	-422	-461	-442	-270	-82	-35	-31	-70	-141	-184	-149	-117	-113	-122
8	X	-117	-137	-86	-117	-113	+94	+86	+246	-266	-246	-508	-438	-352	-66	+43	+121	+125	-20	+51	0	-59	-43	-117	-113	-85
9	X	-129	-117	-149	-82	-137	-121	-39	+113	+70	-254	-540	-457	-360	-270	-109	+117	+43	+86	-35	-12	+66	-23	-262	-203	-117
10		-203	-129	-117	-109	-90	-70	-20	+160	+47	-344	-282	-227	-211	-117	-90	-86	+20	+469	+809	-117	-669	-368	-227	-192	-90
11		-188	-113	-43	-152	-254	-203	+74	+82	-31	-364	-325	-274	-211	-196	+27	-74	0	-39	-51	-16	-31	+12	-156	-129	-111
12		-270	-133	-203	+66	+98	-12	+43	+20	+47	-305	-391	-426	-262	-231	-51	-16	0	-27	+66	+39	+39	+31	-164	-164	-92
13		-12	-215	-223	-133	-31	+20	-129	+145	+168	-383	-540	-454	-239	-113	+39	+74	+39	+86	+31	0	+70	+352	+340	-442	-72
14		-109	-328	-152	-137	-149	-203	-27	+55	+86	-43	-242	-356	-457	-266	-156	-90	-12	-47	-12	-74	-70	+51	-113	-133	-124
15		-289	-145	-152	-164	-106	-90	+211	+102	+199	-66	-164	-196	-242	-242	-254	-156	-16	-8	-90	-82	-39	-70	-192	-106	-98
16	X	-74	-188	-164	-109	-137	-106	-43	+98	+160	+31	-176	-244	-344	-254	-184	-106	-78	-109	-90	-35	-51	-82	-109	-121	-109
17		-149	-117	-90	-156	-59	-207	-78	+184	+231	+16	-231	-240	-313	-239	-196	-66	-106	-156	+27	+551	+403	+614	+618	-637	-21
18		-422	-352	-227	-196	-540	-43	+39	+160	-457	-336	-278	-250	-239	-86	-47	+301	+461	-325	-39	+27	+47	-239	-196	-109	-139
19		-117	-35	-90	-270	-152	+47	-20	+137	+567	-235	-375	-47	-172	+63	+215	-282	-129	-31	+978	-293	-145	-70	-391	-47	-37
20		-113	-74	-442	-723	+344	-43	+133	+133	+188	+43	-196	-516	-203	-196	-242	+305	-156	+117	+125	+332	-364	+235	-328	-309	-81
21		-340	-379	-841	+164	+442	+133	+207	+215	+70	-74	-266	-371	-321	-309	+184	-51	+422	+305	+47	+196	-457	-39	+78	-493	-62
22		+129	-344	-375	+106	-481	+149	+340	-102	+70	+90	-348	-242	-266	-82	-90	-113	+20	+145	+152	-242	-125	-125	-328	+426	-68
23		+31	-184	-207	-422	+235	-231	-16	+113	+152	+137	-563	-540	-270	+51	+66	+164	-188	+223	+137	-55	-109	+156	-618	+63	-78
24		+74	+12	-321	-235	-102	+23	+82	+274	+51	-113	-102	-524	-508	-113	+86	+35	+434	+66	-82	+82	-231	-20	-125	+282	-41
25		-285	-368	-168	-47	-27	-70	+27	+164	+242	-94	-344	-344	-282	-285	-113	-78	-106	-109	-113	-145	-117	-196	-156	-242	-136
26		-70	-465	+262	-109	-106	-78	+8	+117	+125	-457	-598	-399	-426	-352	-223	-23	+70	-31	-90	-20	-51	-125	+145	+47	-119
27		-102	-465	-47	+270	+129	-516	+31	+219	+258	-39	-379	-246	-113	-211	-184	-55	+66	+74	-86	+31	+270	-344	-160	-282	-78
28		-176	-137	-109	-160	-66	+27	+66	+133	+262	-125	-125	-465	-344	-313	-457	+43	+113	-12	-156	-78	-39	-129	-188	-156	-108
29		-82	-407	+258	-188	+297	0	+51	+344	+164	-203	-340	-434	-485	-450	-289	+203	-125	-109	-66	+289	-246	-184	-211	-156	-99
30		+47	-129	-149	-39	-125	-70	+113	+43	+43	-94	-325	-344	-383	-289	-188	-90	+78	-51	+129	-156	-113	-117	-106	-109	-101
31		-141	-152	+199	-203	-90	-66	-141	+94	+125	+47	-192	-379	-579	-434	-152	+39	+188	-106	-59	+360	-74	+78	+31	-215	-76
MEANS ALL DAYS		-138	-187	-143	-132	-63	-81	+24	+129	+101	-133	-316	-356	-322	-223	-115	-12	+45	+5	+43	+9	-83	-55	-120	-144	-94
MEANS 10 DAYS		-150	-115	-120	-126	-111	-102	-6	+119	+52	-117	-319	-364	-346	-251	-144	-36	+33	+10	-33	-36	-67	-106	-126	-137	-109

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	- 78	-169	- 86	-151	- 78	- 86	+ 51	+ 62	+194	+ 78	-116	-183	- 73	- 81	-188	-159	+ 46	- 38	- 56	- 46	-126	- 81	- 27	- 22	- 57								
2	X	- 75	- 62	+ 24	-124	-169	-161	- 81	- 3	- 24	- 19	- 56	+ 19	+ 35	+ 40	-102	- 51	+ 30	- 30	- 24	+ 8	- 51	- 59	- 40	-145	- 47								
3	X	-204	- 86	-218	-116	-129	-102	+ 73	- 38	- 97	- 75	- 32	- 30	- 75	- 43	- 35	+ 48	+196	+ 81	+ 24	+ 59	+ 30	-124	-124	- 89	- 46								
4	X	- 65	- 30	+ 13	- 30	- 30	-105	- 51	- 40	- 27	-116	-113	-167	-183	- 51	+ 11	+ 51	+ 48	+ 13	+ 27	+ 22	- 54	- 22	+ 11	+ 5	- 37								
5	X	-202	- 5	- 81	- 59	- 75	- 65	- 51	+ 30	+ 43	-137	-188	-140	- 75	- 73	- 24	- 59	- 8	+ 8	+ 38	+ 22	- 19	- 51	- 51	-129	- 56								
6	X	- 56	- 89	- 32	-118	- 13	- 86	- 48	+ 97	+ 70	+ 11	-159	- 83	- 19	- 89	- 73	- 59	-129	- 86	- 30	- 16	- 67	-110	- 48	- 75	- 54								
7	X	- 78	- 56	- 81	-132	- 70	-105	- 81	+ 22	+143	+183	+ 81	-100	-169	-237	-202	-102	- 35	+ 13	- 78	-118	-105	- 56	- 48	- 43	- 61								
8	X	- 75	- 91	- 86	-113	-105	+132	+143	+229	-108	-116	-277	-234	-108	+ 59	+ 73	+151	+108	+ 22	+113	+ 59	- 8	+ 11	- 91	- 73	- 16								
9	X	- 81	- 78	-102	- 78	-110	-105	- 54	+ 43	+108	- 89	-264	-210	-102	-108	-110	+ 22	- 30	+ 83	+ 59	+ 30	+ 30	- 48	-105	-108	- 59								
10		-118	- 83	-113	- 94	-108	- 86	- 67	+ 83	+ 75	-194	- 86	+ 19	+ 24	+116	- 38	-121	+ 19	+565	+845	- 51	-681	-304	-118	-175	- 29								
11	-	-132	- 83	- 59	- 86	-213	-140	+118	- 70	+ 32	-153	-178	-116	- 40	-113	+ 46	- 81	+ 13	+ 30	- 24	+ 13	+ 24	+ 22	- 86	- 54	- 55								
12		-110	-102	-194	+ 11	+116	- 24	- 40	- 86	- 38	-226	-178	-113	0	- 30	+ 24	+ 24	- 24	- 24	+ 54	+ 86	+ 89	+ 35	- 59	-161	- 40								
13		+ 65	-132	-156	-108	- 24	+ 51	-140	- 22	+304	-191	-355	-221	+ 22	+ 46	+ 62	+ 81	+ 32	- 59	+ 54	+ 27	+140	+355	+471	-180	+ 5								
14		-180	-196	- 62	-102	-100	-102	-134	- 67	+ 59	+ 13	- 22	+ 30	- 89	-140	-116	-108	- 48	- 89	+ 13	- 78	- 32	+ 75	- 46	+ 19	- 63								
15		-234	- 62	-102	-110	- 24	-129	+140	- 22	+105	+ 32	..	..	..	..	..	-194	- 89	- 54	-105	- 73	- 24	- 56	- 86	- 27	..			
16	X	0	-116	-116	- 83	-108	- 86	- 81	0	+ 27	- 19	- 56	- 56	- 24	- 13	- 65	-102	- 89	- 54	- 56	+ 22	- 11	- 35	- 46	- 81	- 52								
17		- 86	- 56	- 56	-116	- 35	-126	- 70	+ 43	+118	+ 13	- 8	- 22	- 30	- 81	-188	-100	-105	-153	+145	+664	+476	+554	+664	-640	+ 34								
18		-325	-247	-191	-188	-449	- 43	- 67	+ 56	-167	-412	-156	- 27	-132	- 24	+167	+659	+592	-167	-339	+207	- 24	-269	-194	-110	- 77								
19		- 78	- 75	- 46	-221	- 81	- 38	- 48	- 40	+167	- 86	-129	+315	+ 59	+288	+366	-538	- 59	- 46	+309	+ 91	+ 94	-196	-538	+156	- 16								
20		+ 22	- 35	-296	-490	+269	- 27	+ 35	+ 38	+ 70	+285	+344	-360	-204	-153	-137	+312	-234	+113	+ 35	+492	-417	+299	-143	-237	- 17								
21		-291	-253	-436	-207	+293	+169	+ 54	+247	+ 86	+124	-172	-261	-118	-153	+315	+121	+156	+436	+237	-449	-137	- 86	-161	-385	- 36								
22		+156	-261	-264	- 73	-169	+ 46	+196	-102	- 59	+ 56	-143	+ 32	- 83	- 38	-167	-129	-116	+132	+ 46	-105	- 35	-619	- 32	+605	- 47								
23		- 8	- 73	-194	-207	+121	- 48	-194	+108	+471	+291	-409	-261	- 51	+417	+113	+ 46	-186	+153	+ 75	-207	-153	+164	-646	+229	- 19								
24		+ 86	+ 86	-186	-102	-129	+134	- 75	+213	+245	+ 48	+296	-207	-247	- 59	+148	+ 22	+549	+ 22	-288	- 27	-438	+234	-382	+ 16	- 2								
25		- 73	-105	-178	+ 24	- 81	- 22	+ 73	+ 86	+194	- 48	-132	- 73	+ 22	- 91	- 62	- 75	-113	-113	-159	- 94	- 75	-156	-100	-186	- 64								
26		- 48	-153	+194	- 27	-100	- 48	- 56	+ 32	- 13	-247	-180	- 89	-183	-231	-143	- 65	+ 70	- 19	- 56	+ 35	- 24	- 86	+129	+ 35	- 53								
27		+ 46	-304	- 59	+183	+116	-538	-102	-108	+167	+100	+110	+ 89	+334	-122	-210	-129	+ 78	+ 19	- 73	+ 89	+169	-145	- 86	-167	- 23								
28		-143	-124	- 86	- 78	- 54	+ 27	+ 32	+132	+ 86	+ 22	+137	-156	- 51	-178	-436	+113	+ 22	- 59	-164	- 56	- 75	-167	- 48	- 75	- 57								
29		- 40	-452	+277	-169	+234	+ 32	+ 8	+245	+140	- 27	- 30	- 27	-140	-227	-196	+210	-301	-145	- 27	+167	-293	+ 19	-269	+ 22	- 42								
30		+ 56	- 54	-126	- 24	- 94	- 59	+ 75	+102	- 32	+ 11	- 30	- 27	-110	-134	-129	-113	- 22	- 59	+105	+ 19	-207	- 62	- 62	- 54	- 43								
31		-110	-134	+126	-277	+ 22	- 19	-164	- 24	+ 89	+124	+ 11	- 91	-317	-247	-105	+ 73	+237	-100	- 8	+ 83	+ 48	+ 32	+213	-108	- 27								
MEANS ALL DAYS		- 74	-121	- 95	-112	- 45	- 54	- 25	+ 42	+ 77	- 27	- 83	- 92	- 71	- 59	- 47	- 2	+ 23	+ 15	+ 27	+ 32	- 65	- 29	- 69	- 74	- 39								
MEANS 10 DAYS		- 91	- 78	- 74	-100	- 89	- 77	- 18	+ 40	+ 33	- 30	-118	-118	- 79	- 60	- 72	- 26	+ 14	+ 1	+ 2	+ 4	- 38	- 58	- 57	- 76	- 49								

* = 10 LEAST DISTURBED DAYS

TABLE 85

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1933
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
APRIL 1933
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE		OM		LENGTH IN KMS										56.8		DIRECTION		N 19°.5 E	
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		- 82	-196	-125	-117	-109	-160	- 78	-156	+125	- 31	-274	-364	-383	-321	-278	- 55	+254	-149	-145	- 70	- 27	-149	-121	- 78	-129					
2		- 70	-160	-129	- 90	- 70	+ 74	+ 86	+192	+ 23	-278	-399	-344	-109	-192	- 35	+ 47	- 31	+ 12	-203	- 78	+ 12	+ 39	-172	-266	- 89					
3		- 74	-391	+344	+262	-798	+520	+ 90	+188	+109	-184	-563	-540	-391	-207	-188	+ 63	+ 66	+ 82	+457	+ 47	-270	-301	-231	-321	- 93					
4		-145	-375	+125	- 23	-106	- 35	+ 70	+223	- 16	-356	-422	-340	-282	-172	-106	- 78	+188	+ 43	- 35	- 23	- 23	- 43	-223	-145	- 96					
5		- 86	-109	- 12	-137	+ 43	- 35	+246	+375	-129	-321	-500	-391	-199	-145	- 35	- 86	+ 16	- 12	+ 59	-156	-199	-113	+211	-211	- 80					
6		+325	-528	+121	-117	- 51	-282	+188	+125	- 35	-328	-528	-457	-270	-117	- 70	-102	+121	+109	+ 78	- 86	+ 70	+ 70	-364	-235	- 98					
7		-141	- 51	-164	- 39	- 86	+ 20	+ 70	+289	+180	-457	-364	-504	-250	+ 43	-109	- 16	+ 47	+109	- 12	-109	-145	-113	-227	+ 27	- 83					
8		- 43	- 74	-172	-125	- 90	- 31	+ 98	+317	+ 70	-313	-379	-461	-547	-309	-106	+ 31	+192	+ 51	- 31	- 70	-164	- 98	-129	- 43	-101					
9		-325	+278	-520	+ 74	+301	- 31	+ 63	+ 90	+274	-242	-325	-344	-340	-360	-344	-133	- 31	- 31	- 98	-106	- 74	+ 16	+106	-360	-103					
10	X	-301	- 47	+ 51	-250	+ 27	+109	+129	+340	- 43	-309	-364	-348	-360	-383	-242	-121	+ 35	+184	- 31	-121	- 78	- 70	-145	-149	-104					
11	X	-149	-106	+ 39	- 78	- 82	+ 31	+ 16	+250	+227	-219	-547	-516	-438	-325	-207	+ 35	+ 63	+ 39	0	- 27	- 43	-117	-203	-156	-105					
12	X	-125	-117	- 66	- 78	- 51	- 43	+ 86	+213	+188	- 74	-340	-360	-356	-305	-313	-203	-109	+ 23	- 47	- 82	- 66	-108	-109	-125	-107					
13	X	-145	- 78	-149	- 74	- 86	- 31	+ 35	+235	+184	-121	-239	-328	-371	-344	-270	-192	-149	+ 47	- 47	- 43	- 78	- 70	-109	- 86	-105					
14		-164	-203	-227	-133	- 70	+129	+168	+156	+305	+156	-188	-411	-461	-481	-434	+ 51	-106	+113	+ 70	+ 16	+ 31	+125	+152	-196	- 67					
15		-250	-242	-160	- 35	- 43	+149	- 23	+ 51	+ 35	-352	-160	-113	-379	-235	- 59	-129	- 27	+ 16	+113	+ 12	- 23	+254	-149	-215	- 82					
16		-364	- 12	-152	-137	+ 12	+ 78	+125	+293	0	-282	-344	-246	+ 23	-594	-340	- 55	+364	+586	-227	+ 66	+ 35	0	-688	+129	- 72					
17		-196	+ 94	- 66	-461	+ 51	-645	+798	+383	+137	+ 78	-497	-270	-254	-231	- 63	-258	-266	+301	+192	-305	-321	+156	-360	- 70	- 86					
18		+ 74	-207	-145	- 90	- 98	- 55	+109	+109	- 39	-117	-266	- 86	-219	-168	- 66	+ 47	-145	+203	+ 66	-164	-242	-465	-266	-246	-103					
19		-196	+242	+ 98	-833	+ 86	+215	+137	+109	-125	-293	-309	-113	-184	- 90	-313	+293	-199	-164	-152	-203	-242	+149	-442	+508	- 84					
20		-328	-500	-106	+207	- 86	+180	+309	+ 55	-383	-731	-500	-403	-113	- 27	- 39	+ 31	+ 20	+ 86	+188	-325	- 23	-457	- 43	-235	-134					
21		- 35	+ 16	-328	-149	+ 78	+ 90	+266	+ 43	+ 23	- 31	..	..	..	..	-461	+762	- 78	- 23	- 47	- 86	- 31	-117	- 55	-196	..	
22		+ 31	-391	+735	- 35	0	+129	+160	+180	+196	-285	-395	-500	-442	-152	-258	-137	+ 70	- 47	-109	- 86	+ 12	- 47	-559	- 39	- 82					
23		+344	-149	- 55	+ 27	0	- 35	+223	- 39	+ 63	-301	-579	-465	-192	-274	-223	+ 86	+250	+125	+ 51	-109	-164	- 35	-336	-125	- 80					
24	X	-168	-141	- 70	- 43	- 35	- 59	+ 78	+297	+ 86	-278	-516	-430	-348	-383	-164	+ 35	+ 43	+ 74	+ 16	- 74	+ 16	- 74	-235	-129	-104					
25	X	-106	- 31	-242	- 90	+ 74	- 78	+129	+379	+113	-407	-868	-665	-325	-239	- 27	+192	+192	+297	- 39	- 78	-109	-121	-164	-188	-100					
26	X	- 35	+ 86	- 90	- 74	- 47	-192	-106	+414	+332	-145	-508	-500	-254	-344	-321	-137	+ 16	+113	- 16	- 35	- 31	- 39	-117	-152	- 91					
27	X	-125	-121	-109	-125	- 47	- 66	+156	+430	+289	-149	-618	-610	-606	-551	- 31	-262	+117	+196	+235	+164	-125	- 82	- 66	- 47	- 90					
28	X	- 86	- 74	-117	-188	+ 74	- 20	- 31	+168	+180	-145	-434	-434	-317	-274	-301	- 16	+235	+109	- 82	- 70	- 27	- 35	- 20	-113	- 84					
29	X	-211	-242	- 27	- 90	- 35	- 31	+ 66	+156	+109	-192	-473	-473	-371	-344	-262	- 70	+ 39	+ 35	- 16	- 74	- 78	-106	-113	-121	-122					
30		-164	-196	-117	- 47	-113	- 43	+ 47	+164	+164	-125	-673	-673	-528	- 70	- 59	-293	-246	+821	+258	- 12	- 78	- 39	-188	-172	- 99					
MEANS ALL DAYS		-114	-139	- 52	-101	- 49	- 8	+119	+207	+ 90	-235	-434	-403	-320	-262	-181	- 49	+ 35	-116	+ 17	- 76	- 88	- 61	-183	-123	- 96					
MEANS 10 DAYS		-145	- 87	- 78	-109	- 21	- 38	+ 56	+289	+166	-204	-491	-466	-375	-349	-214	- 74	+ 48	+112	- 3	- 44	- 70	- 73	-128	-127	-101					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	* 	COMPONENT					LINE		OW		LENGTH IN KMS										93.9				DIRECTION				E 0° 5' N			
		EASTWARD					6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1		+ 8	-143	- 94	-153	- 59	-145	- 70	+105	+188	+129	- 30	-105	-159	-237	-210	+ 46	+331	-207	-132	- 35	+ 48	-108	-113	- 46	- 50						
2		- 27	-113	-210	- 46	- 51	+ 51	+ 56	+108	+ 83	-100	-145	- 30	+188	- 32	+ 81	+105	- 59	-196	-143	- 30	+ 11	-245	- 22	-194	- 40						
3		- 75	-242	0	+143	-269	+239	+ 46	+183	+153	+ 22	-218	-194	-164	-156	-164	+ 35	+ 70	+207	+315	+304	-315	-274	-156	-183	- 29						
4		-108	-169	+ 22	- 24	-161	- 73	- 19	+132	+ 35	-113	- 81	-113	- 86	-100	-102	-105	+191	+ 86	+ 62	- 27	+ 62	+ 27	-247	-134	- 44						
5		- 83	-113	- 35	-156	0	- 59	+140	+245	- 62	- 51	-143	-148	- 11	- 51	- 32	- 97	+ 56	+ 97	+ 30	- 51	-183	- 81	+ 22	- 59	- 34						
6		+242	-377	+ 54	-105	- 70	-274	- 40	+ 40	+ 13	-129	-180	-167	- 54	+ 19	- 27	-207	- 13	+110	+134	- 27	+ 48	+ 62	-140	-221	- 55						
7		-105	- 97	-188	- 48	- 54	- 27	- 62	+301	+221	-169	-148	-223	- 54	+261	-256	-113	+ 35	+129	+ 56	- 22	- 86	-118	-140	- 48	- 40						
8		+ 30	- 38	-102	-129	- 89	- 81	- 48	+167	+116	- 83	+ 24	-164	-395	-269	-102	+ 13	+167	+161	+ 75	- 59	-143	- 35	- 32	- 62	- 45						
9		-196	+223	-183	- 78	+221	- 22	+ 35	+ 46	+210	- 32	+ 11	- 40	-118	-234	-253	-126	- 46	- 59	- 35	- 48	- 43	+ 32	- 89	-226	- 44						
10	X	-100	- 73	+ 78	-126	+ 40	+ 62	+ 51	+247	- 73	-137	- 32	- 54	-183	-293	-191	-105	- 16	+132	+ 30	- 75	- 27	- 22	-102	-100	- 45						
11	X	-134	-156	+ 46	- 46	- 65	+ 30	- 11	+132	+186	- 19	-140	- 78	-169	-183	-143	- 38	- 40	- 46	+ 16	+ 11	- 19	- 35	-132	- 83	- 46						
12	X	-110	- 86	- 24	- 43	- 48	- 56	+ 24	+148	+129	+ 54	-105	- 81	-118	-100	-159	-153	-140	- 65	- 81	- 59	- 35	- 73	- 67	- 81	- 55						
13	X	- 86	- 32	-143	- 59	- 56	- 22	- 13	+140	+ 75	- 59	- 51	- 54	-132	-169	-108	-102	-140	0	- 56	- 5	- 54	- 27	- 56	- 32	- 52						
14		-113	-167	-191	-180	- 40	+194	+ 83	+ 8	+145	+183	+ 86	- 59	-100	-137	-237	+140	- 65	+ 43	+ 56	+ 19	+ 54	+126	-175	- 27	- 15						
15		-223	-183	-159	+ 38	- 81	+126	- 75	-121	- 59	-247	+145	+291	+ 91	+221	-377	-143	-118	-134	+ 35	+ 48	-156	- 81	+ 83	-180	- 21						
16		- 67	- 62	-210	- 43	+ 59	+ 51	+113	+199	-134	-207	-156	+ 48	+562	-640	-328	+ 27	+632	+557	-164	-175	+207	- 27	-417	+ 62	- 5						
17		-105	+ 32	+ 13	-500	+ 35	-315	+530	+143	+207	+358	-269	-113	-113	+ 19	+188	+116	-169	+ 65	+ 89	-202	-371	- 81	+116	- 67	- 16						
18		+194	-113	- 86	- 91	- 67	-100	+ 75	+140	+ 59	+ 65	- 27	+264	- 70	+ 22	+277	+116	-221	+277	+ 81	-522	+ 22	-317	-237	-256	- 21						
19		- 67	+291	+100	-350	+167	+342	-156	+ 54	+ 35	- 62	- 54	+ 97	-156	+ 97	-355	+420	-231	-145	- 81	-132	-153	-148	-234	+745	+ 1						
20		-315	-237	- 86	+121	+202	- 46	+229	+299	0	-285	-291	-194	0	+108	- 67	- 73	- 75	- 35	+288	-124	- 19	-269	- 30	-183	- 45						
21		+ 89	+ 30	-153	-110	- 32	- 67	+ 46	+ 13	+ 89	+169	+ 35	+132	-175	-377	-538	+942	-331	- 24	- 48	-194	-202	-194	- 51	-296	- 52						
22		-100	-231	+463	+126	- 62	+148	+ 22	+183	+140	- 27	- 94	-247	-188	+ 35	-293	-169	+ 86	- 86	-137	-153	+ 48	+134	-619	+ 86	- 39						
23		+390	-102	- 59	- 35	- 35	- 59	+280	- 54	+153	+ 30	- 86	-116	+ 83	-102	-172	- 70	+113	-132	+ 86	- 91	-129	-108	-390	+ 35	- 24						
24	X	-132	- 65	- 78	- 78	- 59	-113	- 59	+172	+250	- 83	-108	-129	-121	-194	-102	+ 43	+105	+ 43	- 75	-129	- 51	- 75	-183	-137	- 57						
25	X	- 86	+ 35	-140	-121	+ 48	- 30	- 11	+210	+161	- 22	-342	-264	-129	-186	- 86	+ 59	+102	+167	- 11	0	-164	-113	-183	-336	- 60						
26	X	- 38	+167	- 19	- 81	- 54	-143	-213	+196	+156	+ 89	+ 8	- 73	+121	-196	-293	-140	- 62	+ 54	- 56	- 27	+ 27	+ 32	-134	-121	- 33						
27	X	-110	-108	-113	-129	- 75	-105	+ 13	+221	+253	+ 30	-226	-221	-366	-304	+247	-218	+105	+239	+ 62	- 27	-223	-105	+126	- 51	- 45						
28	X	-134	- 91	- 51	-194	- 13	-105	-210	+ 51	+ 86	+ 30	-134	- 73	- 43	- 75	-188	- 51	+140	+ 19	- 73	- 48	+ 8	+ 32	- 22	- 81	- 51						
29	X	-183	-202	- 51	-100	- 54	- 59	- 27	+ 8	+ 48	- 56	-183	-183	-169	-188	-143	- 46	+ 48	+ 75	- 30	- 51	- 51	-137	- 56	- 81	- 78						
30		-140	-132	-156	- 30	-140	-132	- 27	+ 46	+ 27	-175	-331	-320	-226	+484	+726	-672	+ 94	+592	+ 62	- 32	- 54	- 32	-229	- 94	- 37						
MEANS		- 63	- 85	- 58	- 88	- 29	- 26	+ 23	+125	+ 96	- 30	-109	- 87	- 82	- 99	- 88	- 19	+ 18	+ 64	+ 12	- 65	- 65	- 75	-130	- 82	- 39						
ALL DAYS																																
MEANS		-111	- 61	- 50	- 98	- 34	- 54	- 46	+152	+127	- 17	-131	-121	-131	-189	-117	- 75	+ 10	+ 62	- 27	- 41	- 59	- 52	- 81	-110	- 52						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

TABLE 87

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										NORTHERLY										LINE										OM										LENGTH IN KMS										DIRECTION										N 19° 5 E																																															
		3-4					4-5					5-6					6-7					7-8					8-9					9-10					10-11					11-12					12-13					13-14					14-15					15-16					16-17					17-18					18-19					19-20					20-21					21-22					22-23					23-24					MEAN		
1		- 12	- 39	- 55	+ 66	+ 78	- 39	- 418	+747	-1173	+704	+508	-782	+274	+137	+246	-344	+614	+1087	-500	-242	-379	-113	-188	-567	- 16																																																																																			
2		+ 70	+199	-473	- 70	+ 43	+ 27	+ 74	+ 43	+ 70	- 47	-289	-411	-348	-344	-211	- 47	- 94	+ 47	+352	-368	-289	- 23	-145	-184	-101																																																																																			
3		-360	+ 82	-149	-196	-340	- 35	+242	+ 31	+ 47	- 27	- 47	-207	-426	-360	-180	-207	- 31	-156	+ 43	+149	+235	+ 31	-141	-481	-107																																																																																			
4		- 35	- 66	-282	-117	+ 82	- 47	+ 74	+207	+ 70	-309	-325	-106	-227	-129	- 39	-129	-137	- 82	- 74	-184	-192	+149	+ 66	-141	- 82																																																																																			
5		-250	-231	-207	- 35	+ 23	- 63	-203	-196	-152	-227	-106	- 51	-125	-145	+ 27	+ 43	- 47	- 31	+477	+508	-516	-266	-164	-418	- 98																																																																																			
6		-328	- 51	+ 43	-340	+ 27	+ 70	+375	0	-125	-223	-262	-172	- 74	-149	-235	-109	+379	+692	-700	-442	-301	-156	+129	-145	- 87																																																																																			
7	X	- 23	+125	-215	-215	- 23	+113	+ 51	+258	+164	-242	-344	-387	-325	-196	-102	- 82	- 78	- 78	-106	- 66	-152	-156	-188	-121	-100																																																																																			
8	X	-152	- 43	- 59	-106	+ 35	- 51	+ 23	+188	+196	-328	-360	-430	-285	-196	-113	- 63	- 74	-125	-121	- 63	- 43	-117	- 70	-102	-102																																																																																			
9	X	- 82	- 86	- 86	- 31	+ 51	+ 78	+160	+199	+ 35	-305	-278	-313	-352	-344	-254	-152	- 12	0	- 51	- 35	- 63	-156	-141	- 70	- 95																																																																																			
10	X	-282	- 82	+102	- 43	- 74	+ 23	+199	+336	+266	-242	-594	-657	-395	-262	- 86	- 78	-106	- 43	+ 63	- 78	0	- 78	-149	-117	- 99																																																																																			
11	X	-258	- 90	-125	-125	+ 23	+109	+321	+231	+ 66	-473	-571	-540	-399	-219	-117	+ 66	+ 74	+ 12	- 55	-117	-137	-109	-117	- 90	-110																																																																																			
12	X	- 78	-109	-109	- 82	- 47	- 27	+203	+332	+ 90	-282	-540	-586	-465	-313	-149	+160	- 12	- 47	-152	- 74	+152	+117	+258	-227	- 83																																																																																			
13		-242	0	+ 66	+ 70	- 16	- 31	+ 86	+254	+156	-164	-469	-622	-579	-371	-348	-168	- 23	+242	-235	-121	- 78	-152	- 39	- 55	-118																																																																																			
14		- 27	+ 31	- 27	- 82	-106	-113	+117	+242	+133	-246	-235	-274	-258	- 16	-121	- 86	- 39	- 78	- 70	- 43	+317	+500	- 90	-274	- 35																																																																																			
15		-422	-368	- 35	+133	-109	+ 12	+ 43	+ 55	- 51	- 86	-364	-411	-391	-340	-207	+192	- 23	- 70	-160	-164	-125	- 63	- 82	-113	-131																																																																																			
16		-133	- 51	-156	+ 20	- 66	- 35	+109	+289	+164	-129	-465	-712	-551	-325	- 23	+ 78	+125	+109	- 39	-211	-196	-149	-121	- 78	-106																																																																																			
17		- 39	- 78	-117	-109	+ 43	+ 12	+160	+239	- 82	-282	-469	-426	-438	-379	-109	+ 35	+270	+266	- 16	+332	-305	+461	-184	+266	- 40																																																																																			
18		-547	+344	-254	-196	+344	+152	+219	+227	-125	-481	-579	-536	-454	-149	- 43	+145	+ 90	+ 43	- 70	- 51	-266	- 23	-199	-121	-105																																																																																			
19		-125	-168	-109	+ 82	+ 20	+ 98	+258	+246	+227	-125	-360	-477	-586	-375	-282	- 82	+ 70	+ 59	- 35	-121	-109	- 51	- 31	- 74	- 85																																																																																			
20		-418	-109	- 82	+ 63	+ 27	+109	+242	+364	+113	-399	-653	-665	-403	-188	+ 20	+160	+ 31	- 78	-168	-168	-227	+ 27	- 74	- 55	-105																																																																																			
21		+ 39	- 47	-121	- 35	- 27	+ 27	+145	+152	+141	-352	-426	-508	-321	-199	- 47	+ 94	- 66	+ 74	- 94	-192	-207	- 70	- 35	-117	- 91																																																																																			
22		-188	+ 31	+ 23	- 70	- 8	+109	+239	+223	+164	-418	-790	-657	-387	-203	- 39	+188	+176	- 78	-145	- 98	-121	- 74	0	-266	-100																																																																																			
23	X	- 31	- 82	+ 39	- 35	+ 70	- 51	+227	+278	+ 16	-383	-426	-497	-383	-352	-184	- 63	- 39	- 35	-106	-137	- 94	- 86	-117	-117	-108																																																																																			
24	X	- 51	-156	- 27	+ 31	+ 74	- 12	0	+152	- 23	-214	-438	-512	-489	-270	- 66	- 20	- 66	+ 12	+215	-188	-176	- 39	-164	-133	-107																																																																																			
25		- 51	- 74	- 43	- 27	- 35	+ 31	+242	+231	+ 47	-442	-626	-712	-536	-227	-184	- 39	+113	+149	+156	- 27	- 39	- 86	- 90	-106	- 99																																																																																			
26	X	-125	-117	-203	- 23	+ 27	+ 43	+184	+301	+254	- 43	-438	-669	-696	-512	-364	- 51	+242	+266	+ 78	- 94	-180	-106	-121	- 78	-101																																																																																			
27		-149	-125	-109	- 70	- 35	+109	+262	+497	+360	- 86	-422	-712	-774	-540	-309	+ 63	+192	+340	+520	+ 47	-301	-246	-109	-168	- 74																																																																																			
28	X	-192	-121	- 86	-102	- 59	+ 12	+145	+109	-141	-246	-317	-340	-289	-266	-188	-168	+ 12	+ 27	- 51	- 90	-156	-109	- 39	-231	-120																																																																																			
29		-129	- 86	0	+ 31	+ 31	+129	+461	+493	- 78	-551	-594	-540	-282	+172	-207	+ 63	+ 23	+360	+317	+301	+344	-242	-196	-168	- 14																																																																																			
30		- 98	+215	-262	+ 78	- 35	+106	+ 16	+102	- 39	-246	-946	-637	-301	-313	-129	+ 27	+325	+297	-203	- 82	+692	+344	-880	+ 47	- 80																																																																																			
31		+ 16	-414	-211	-364	-109	+215	+125	-109	- 39	-270	-235	-125	-266	-125	- 47	+ 27	- 66	- 66	- 27	+880	+ 39	+ 23	- 51	-196	- 58																																																																																			
MEANS ALL DAYS		-152	- 57	-107	- 61	- 3	+ 35	+141	+217	+ 24	-231	-402	-473	-372	-242	-132	- 18	+ 59	+100	- 31	- 40	- 93	- 33	-112	-152	- 89																																																																																			
MEANS 10 DAYS		-127	- 76	- 77	- 73	+ 8	+ 24	+151	+238	+ 92	-276	-431	-493	-408	-293	-162	- 45	- 6	- 1	-129	- 94	- 85	- 84	- 85	-129	-103																																																																																			

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+ 48	+ 13	-158	- 40	+ 24	- 67	-230	+630	-335	+992	..	..	..	..	..	-445	+340	+308	+292	-193	-448	-193	-244	-603	..	
2		+ 62	+ 67	-220	-153	- 48	- 70	- 19	- 21	+ 35	+ 59	-105	-180	- 88	-155	- 64	+ 86	-166	+ 51	+137	-182	-257	+ 8	-222	-228	- 70						
3		-300	+ 72	-131	-166	-212	-174	+ 43	-110	+ 11	+ 59	+129	+147	-297	-289	-137	-142	+ 46	-137	+ 21	+ 86	+102	+113	-129	-474	- 78						
4		- 24	+ 19	-268	-118	+ 21	-180	- 70	+ 86	+139	-155	-155	+244	-142	-113	+ 27	- 64	-110	- 59	- 51	-131	-188	+180	-174	- 62	- 56						
5		- 32	-239	-177	- 27	-102	-193	-145	-201	-212	+ 21	+145	+139	+ 40	+ 27	+ 72	- 24	-115	- 48	+440	+134	-113	-147	- 21	-249	- 43						
6		-303	- 83	- 46	-182	+ 48	-145	+423	-145	-115	-129	-102	+ 19	+ 80	- 75	-239	-126	+461	+300	-464	-330	-214	-172	+ 48	-172	- 69						
7	X	- 32	+155	-126	-161	- 43	+ 56	+ 48	+166	+ 99	-153	-129	-147	-188	-127	- 35	- 80	- 62	-113	-121	-110	-161	-169	-209	- 46	- 71						
8	X	-134	- 48	- 72	-102	- 27	- 91	- 83	+ 54	+102	-185	- 62	- 75	-118	-158	- 62	- 27	- 80	-158	-134	- 40	- 35	- 99	- 64	-155	- 77						
9	X	- 83	-107	-129	- 54	- 11	- 16	+ 11	+ 64	+ 32	-131	+ 5	- 46	-139	-193	-201	-172	- 54	- 35	- 72	- 8	- 75	-102	-126	- 78	- 72						
10	X	-314	-163	+ 86	- 11	- 99	- 59	-113	+252	+180	-180	-340	-356	-239	-115	+ 27	- 27	- 59	- 48	- 19	-102	- 48	- 35	-115	- 88	- 83						
11	X	-249	- 88	-145	-166	- 40	+ 11	+166	+145	+172	-172	-209	-236	-217	-102	-134	- 35	- 27	- 46	- 80	-139	-105	- 80	- 88	- 78	- 81						
12	X	- 59	-131	-123	-134	-110	- 78	+139	+230	+ 54	-273	-295	-236	-260	-155	- 11	+206	+ 21	- 75	-142	- 51	+206	-139	+247	-150	- 55						
13		-196	- 32	- 43	- 19	+ 8	- 70	+ 8	+118	+174	+ 54	-113	-201	-287	-166	-249	-185	+ 19	+244	-276	-196	-142	-193	- 75	- 99	- 80						
14		+ 8	- 35	+ 72	- 88	-155	-228	- 46	+ 83	+142	- 32	+206	+129	+105	+397	+ 83	-169	-145	-375	-236	-139	+375	+193	+ 38	-289	- 4						
15		-354	-348	- 56	+ 24	- 80	- 59	- 83	- 96	-166	- 24	-147	-102	- 73	-115	- 51	+249	+ 56	- 75	-276	-158	-107	- 83	- 78	- 80	- 95						
16		-158	- 29	-188	+ 54	- 56	- 46	- 29	+129	+155	0	-190	-340	-375	-182	+137	+ 54	+145	- 19	- 99	-180	-193	-139	-102	-155	- 75						
17		- 35	- 21	- 54	-142	+ 35	-105	- 16	+ 67	+ 21	- 99	- 86	- 27	-169	-316	+ 35	+193	+437	+249	-370	- 40	-563	+657	-155	+335	- 7						
18		-482	+303	- 83	-172	+182	+ 62	+ 96	+247	+ 24	-284	-263	-252	-348	-107	+ 32	+163	+ 80	+ 38	- 27	- 88	- 86	-105	- 59	- 88	- 51						
19		-113	-155	- 80	+ 51	- 13	+ 19	+134	+158	+182	+ 96	- 73	-131	-268	- 35	-314	-220	- 32	+ 13	+ 24	- 51	-196	+ 64	+ 21	+ 8	- 43						
20		-276	-153	- 51	- 19	- 59	- 51	+113	+239	+201	- 75	-265	-381	-260	- 51	+ 94	+134	- 21	-115	-126	-180	-118	-142	- 48	- 83	- 71						
21		+129	+ 24	-113	- 32	- 56	- 73	+ 13	+137	+ 54	- 99	-102	-126	-182	-188	- 80	+ 46	+ 75	+ 75	- 35	-185	-155	- 32	- 64	- 99	- 51						
22		-155	+ 54	- 11	- 75	- 35	+ 8	+155	+196	+182	-113	-399	-356	-236	-161	- 59	+228	+ 96	- 51	- 78	- 38	- 80	+ 21	- 51	-209	- 49						
23	X	+ 54	- 43	+ 24	- 21	+ 8	-139	+ 80	+185	+129	- 94	-161	-214	-155	-134	- 62	- 16	- 40	- 78	- 48	- 62	- 5	-121	- 38	- 70	- 43						
24	X	- 29	-131	- 54	+ 35	+ 8	- 56	-185	- 29	+ 75	-102	-182	-142	-139	- 88	+ 46	+ 21	- 59	+ 46	+198	- 54	-142	- 19	-134	-105	- 51						
25		- 35	- 62	- 27	- 8	- 32	- 40	+107	+137	- 24	-241	-268	-359	-206	- 75	- 99	- 19	+115	+134	+166	+ 83	+ 24	- 24	- 35	- 40	- 34						
26	X	- 80	- 86	-121	0	- 5	+ 8	+ 43	+193	+214	+ 54	- 72	-225	-423	-378	-322	- 72	+193	+214	+ 94	- 35	-121	- 59	- 78	- 48	- 46						
27		-126	- 88	-102	- 80	- 70	- 64	+ 32	+222	+354	+252	- 19	-180	-407	-351	-131	+236	+196	+311	+330	+289	+324	-214	- 88	-137	- 7						
28	X	-201	-113	- 91	-129	- 78	-113	- 13	+ 11	-163	-161	- 51	+ 27	+ 19	-102	- 48	-105	+ 29	+ 11	- 72	- 54	-134	- 78	- 13	-255	- 78						
29		-118	- 75	- 35	- 27	+ 27	+ 8	+268	+311	+166	-244	-209	-110	+ 24	+525	-198	+ 51	+ 35	+346	+367	+303	+129	-456	- 32	- 51	+ 42						
30		+ 16	+ 48	- 75	+ 21	- 75	-158	-158	+ 43	+ 72	- 24	-515	-289	- 86	-126	- 48	+ 27	+314	+222	- 80	- 19	+504	-431	-697	+ 99	- 59						
31		- 38	-147	-220	-289	- 72	- 32	+182	-257	- 27	-145	+ 86	+209	- 96	- 13	+102	+ 48	-115	- 24	+ 21	+657	-142	+206	+118	-314	- 13						
MEANS ALL DAYS		-122	- 54	- 89	- 73	- 38	- 69	+ 37	+ 87	+ 75	- 84	-131	-127	-171	-104	- 63	+ 9	+ 36	+ 27	- 34	- 34	- 79	- 58	- 81	-115	- 52						
MEANS 10 DAYS		-113	- 76	- 75	- 74	- 40	- 48	+ 9	+127	+ 89	-140	-150	-165	-186	-156	- 80	- 31	- 14	- 28	- 40	- 66	- 62	- 90	- 62	-107	- 66						

* = 10 LEAST DISTURBED DAYS

TABLE 89

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1933

JUNE 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										DIRECTION N 19°.5 E																
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-802	+103	-126	-111	-47	-174	+59	+209	+126	-288	-308	-320	-229	-237	-51	+122	-40	-130	-32	-221	-40	-32	-162	-205	-122
2	X	-166	-118	-256	-99	-71	+225	+284	+233	-130	-442	-517	-514	-324	-225	-32	+79	+51	+47	0	-71	-126	-71	-79	-107	-101
3	X	+280	-557	+51	+43	-150	+40	+190	+190	+51	-269	-608	-415	-217	-194	-138	-59	0	+71	-43	-237	-166	-40	-107	-150	-101
4		-87	-71	-99	-32	-158	+87	+198	+174	+40	-292	-478	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7		-107	-59	0	-32	-115	-107	+115	+87	-138	-312	-557	-54	-316	-111	..	-32	-40	-107	-79	-126	-115	-79	0	-126	..
8		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+205	+256	+387	0	-111	+442	+758	..
20		-395	-525	-79	-122	+99	+59	+241	-32	-276	-470	-581	-474	-336	-186	-502	-103	+395	-126	-75	-190	-118	-118	+79	0	-160
21		-194	-32	-20	-107	-91	-87	+20	+87	-83	-434	-556	-434	-276	-122	-118	+217	+59	+87	-79	-59	-40	-40	-79	-118	-104
22	X	-79	-20	-59	-20	-20	+47	+118	+178	-59	-198	-320	-411	-324	-284	-115	-99	-99	-59	0	-59	-111	-126	-107	-87	-96
23	X	-87	-118	-99	-71	-79	+32	+150	+253	+162	-198	-549	-549	-556	-198	-154	-257	+40	+138	+51	-83	-71	-91	+20	-71	-99
24	X	-194	-284	-154	-71	-63	+40	+257	+312	+166	-126	-470	-391	-316	-391	-237	-158	-158	-43	-198	-138	-158	-43	-136	-126	-128
25		-126	-138	-237	-632	+28	+59	+237	+375	+474	-276	-415	-178	-328	-395	-466	+198	-130	+99	+198	-233	-269	+233	0	-59	-83
26	X	-312	-363	-269	-198	-233	+59	+198	+316	+198	-198	-198	-367	-533	-494	-427	-162	-20	-24	-40	-71	-67	+40	-154	-103	-143
27		-59	-573	-47	+356	+182	+122	+198	+276	+40	-40	-296	-363	-134	-205	-194	-162	-79	+403	+162	-296	+126	-40	+40	-525	-46
28		-344	+59	-71	-115	0	+40	+178	+379	+198	-375	-585	-514	-296	-47	-36	+40	-99	-59	-126	-36	-51	-40	+20	-194	-86
29	X	-375	+233	-59	-134	-118	+36	+91	+28	+40	-213	-387	-470	-517	-292	-55	+71	+32	+154	-32	+87	+59	+28	-217	-162	-90
30	X	-162	-158	-83	+43	0	-28	+237	+237	-51	-628	-668	-703	-498	-158	+162	+284	+249	+32	-87	-273	-118	-118	-59	-55	-108
MEANS		-215	-178	-108	-88	-40	+34	+176	+217	+61	-297	-461	-436	-350	-245	-169	+1	+14	+42	-21	-134	-82	-33	-67	-140	-105
ALL DAYS																										
MEANS		-137	-173	-116	-63	-92	+56	+191	+218	+47	-284	-465	-478	-413	-280	-124	-38	+12	+40	-44	-106	-95	-53	-104	-108	-109
10 DAYS																										

* = 8 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1933
 EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
 JUNE 1933

DAY	*	COMPONENT EASTWARD										LINE		OW		LENGTH IN KMS										93.9 DIRECTION										E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																					
1		-637	+285	-62	-73	-35	-163	-60	+244	+358	-95	-138	-122	-81	-68	+95	+127	-68	-141	95	-149	+62	-27	-244	-81	-49																				
2	X	-108	-27	-244	-68	-347	0	+176	+217	+33	-203	-285	-230	-136	-195	0	+106	+81	+108	-27	-46	-54	-27	-54	-81	-59																				
3	X	+149	-271	+27	+33	-81	-81	+14	+190	+95	-149	-241	-187	-136	-122	-35	+79	+108	+136	-27	-149	-81	-95	0	-168	-41																				
4		-81	-54	-54	0	-27	+27	+81	+114	+68	-244	-257	-149	-136	-136	+27	-54	+27	+27	-62	-81	-133	-76	-81	-49	-54																				
5		-41	-8	-27	+14	-35	+35	+114	+108	+27	-149	-271	-285	-195	-35	+152	+136	+27	-62	-35	-43	-33	-27	-27	-271	-39																				
6		-144	-76	-54	-14	-27	-54	+27	+106	0	-127	-190	-182	-160	-81	+27	+22	+27	-136	-60	-81	-79	+27	+14	-54	-53																				
7		-60	+30	-27	-35	-87	-176	-54	+87	-27	-68	-114	-144	-114	-73	+8	-27	-68	+122	+81	-54	-81	0	-81	-165	-47																				
8		+60	+14	-54	-339	+163	-62	+176	+230	-41	-312	-271	+81	+27	-41	+379	+176	+325	+244	+325	-257	+27	-27	-54	-95	+28																				
9		-149	+87	-203	-108	0	+54	+60	+136	0	-108	-149	-271	-149	-49	-49	-54	+54	+190	-54	-98	-76	-41	-54	-108	-52																				
10		-76	-81	-136	-95	-108	-81	-54	-46	-22	-190	-304	-157	+136	+54	+217	+203	+68	-46	-41	-54	-214	-54	-54	-163	-54																				
11		-41	+136	-14	0	+84	-108	-14	-46	-49	-217	-260	-211	-95	0	+27	+95	+49	+149	-95	-133	-65	+27	-27	-30	-35																				
12		-49	-60	-60	-54	-35	-49	-6	+73	+114	-14	-122	-214	-276	-187	+14	+217	+184	-136	+366	+520	+921	-515	-515	-176	-2																				
13		-515	-49	+27	-68	-230	0	-35	+230	+271	-360	-160	+114	-27	+27	+271	+360	+249	-257	+81	-420	-244	-509	+149	+14	-45																				
14		-515	+366	+54	+54	-130	-33	+103	-54	-108	-312	-54	+35	-51	-133	-22	+89	-54	-14	+434	+136	+14	-249	-98	-244	-33																				
15		-222	-122	-81	-127	+33	0	0	-14	-60	-22	-192	-271	-203	0	+106	-54	+22	-79	-114	-149	-84	-54	-68	-130	-79																				
16		+54	-33	-41	-54	-27	-54	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
17		..	..	..	..	..	..	..	-41	-136	-176	-284	-298	-98	-14	..	..	-27	-27	+19	-103	+35	-27	-81	+33	..											
18		-81	+35	+81	+76	+6	+22	+95	+81	+81	-73	-241	-217	-461	-214	-149	+122	+230	+238	-108	-152	-108	+136	+122	-108	-24																				
19		-230	-136	-114	-211	+362	+27	+163	+133	+125	-27	-136	-257	-160	-122	+65	+217	+163	+312	+474	+406	+14	-136	+366	-46	+52																				
20		-217	-344	-217	-54	-108	+19	+81	+149	-241	-466	-366	-108	0	+81	-192	+33	+406	-95	0	-92	-27	-60	+81	-114	-77																				
21		-84	+30	+60	-27	-62	-89	-108	-95	-108	-276	-285	-122	-14	+114	0	+190	+54	0	-35	+38	+81	-295	+49	-27	-42																				
22	X	0	-27	-68	-14	-60	-60	0	+103	+14	-54	0	-81	-27	-81	+14	-27	-81	-108	-14	-22	0	-41	-27	-30	-29																				
23	X	-65	-76	-84	-43	-89	-95	0	+149	+266	+98	-176	-244	-249	+54	-22	-81	+27	+84	+79	-81	-35	0	+19	-14	-24																				
24	X	-106	-236	-79	-89	-89	-81	+54	+163	+117	-19	-146	-30	-49	-168	-14	0	-65	-51	-244	-136	-130	+27	-108	-84	-65																				
25		-68	-108	-154	-396	-73	-108	-27	+152	+366	+27	-27	+176	+81	-217	-241	+404	-122	+81	+190	-244	-301	+230	0	+27	-15																				
26	X	-195	-230	-165	-84	+95	-30	+54	+163	+190	-60	+60	-27	-257	-279	-285	-54	0	-14	-54	-127	-108	-81	-149	-111	-73																				
27		-41	-461	-203	-241	+62	-46	-136	-49	+54	+60	+108	+19	+103	+22	-27	-100	-35	+610	-27	-298	+54	-149	-271	-406	-56																				
28		-165	+84	-27	-136	-27	-54	+287	+244	+176	-304	-333	-312	-27	+195	+195	+230	+203	+79	-214	-138	+35	+27	-339	-27	-14																				
29	X	-244	+271	-49	-19	-54	-27	+46	+203	0	-276	-274	-125	-163	-87	+103	+136	+108	+190	+27	+27	-54	+190	-27	-144	-10																				
30	X	-81	-95	-68	+133	+81	-95	+122	+87	+54	-415	-279	-358	-293	-114	+154	+220	+244	+84	-62	-220	-49	-81	-54	+54	-43																				
MEANS ALL DAYS		-143	-40	-71	-71	-30	-47	+41	+109	+63	-156	-182	-139	-111	-66	+29	+97	+73	+54	+27	+75	-27	-67	-55	-101	-37																				
MEANS 10 DAYS		-81	-86	-91	-19	-68	-59	+58	+159	+96	-135	-168	-160	-164	-124	-11	+47	+53	+54	-40	-94	-64	-14	-50	-72	-43																				

* = 8 LEAST DISTURBED DAYS

JULY 1933

JULY 1933

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 19.5° E				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		-59	-98	-70	-27	-199	+113	+78	0	-51	-399	-391	-336	-391	-47	-70	-164	+332	0	-113	-313	-113	-102	+39	-39	-101
2		-117	-47	-250	+12	-39	+8	+129	+223	+117	-469	-540	-383	-274	-188	-149	+39	+137	+39	-156	-411	-293	-196	-47	-20	-120
3		-78	-98	0	+20	+39	-39	+78	+207	-39	-254	-371	-235	-137	-20	-20	-20	-117	-176	-203	-90	+8	-235	-129	-125	-85
4		-164	-117	-149	-137	0	+70	+293	+196	-274	-547	-477	-434	-141	-8	+39	0	+27	+125	+156	-117	-20	-164	-59	-156	-86
5		-70	-82	-86	-12	+70	+59	+156	+164	-59	-520	-798	-704	-547	-196	-106	+156	+215	+262	+12	-188	+20	-98	-98	-293	-114
6	X	-59	+39	-196	0	+156	+129	+207	+239	+137	-430	-786	-927	-598	-313	-47	+188	+313	+313	+121	+8	+78	-78	-215	-117	-77
7	X	-98	+39	-20	-78	+98	+125	+274	+270	-20	-352	-626	-684	-567	-344	-16	-39	+106	+235	+47	-254	-137	-59	+20	-152	-93
8		-70	-70	-59	-8	-43	+39	+137	+160	+98	-391	-626	-735	..	..	..	..	..	..	..	..	..	..	..	..	..
9		..	..	..	..	..	..	..	..	..	-47	-473	-450	-512	-313	-219	+59	+39	-39	-70	-86	+137	+235	-86	-278	..
10		-176	-235	-274	+39	-70	+59	+78	+117	-20	-215	-543	-622	-203	-235	-39	0	+20	+59	+391	-371	-152	-66	-192	-156	-117
11	X	-313	-20	-117	+152	+20	-102	+192	+219	-469	-137	-78	-98	-348	-583	-391	-270	+70	+149	+23	+254	-156	-98	-98	-254	-102
12	X	-117	-137	-113	-98	-117	-70	+156	+168	-20	-274	-352	-344	-74	-247	-178	-127	+42	0	-123	-165	-153	-148	-131	-114	-122
13	X	-157	-148	-187	-136	-106	-21	+114	+220	+136	-191	-318	-475	-522	-424	-254	-148	+42	+136	-21	-85	-85	+85	+42	+68	-105
14	X	-148	-233	-178	-85	-85	-72	+25	+123	+127	-13	-432	-606	-471	-242	-114	-38	+30	0	-127	-123	-21	-85	-114	-85	-124
15		-191	-21	-85	-76	-89	-30	+34	+72	+161	+85	-360	-505	-530	-496	-343	-208	0	+76	0	-81	-89	-21	-76	-17	-116
16		0	0	+102	+42	-212	+76	+42	+165	-127	-369	-538	-483	-466	-225	-170	+127	+208	+114	-72	-208	-254	-148	+21	-148	-105
17		-51	-305	-254	+85	-148	+212	0	+8	+127	-85	-254	-403	-390	-360	-250	+127	+123	+382	+233	-246	-106	-191	-250	-89	-87
18		-382	-42	-114	-127	+76	-220	+64	+170	+34	-64	-466	-414	-318	-293	-148	-212	+8	+76	+42	-89	-136	-85	-170	-259	-128
19		-212	+42	-64	-21	-21	+55	+76	+144	-42	-220	-488	-432	-437	-305	0	+42	+8	+254	-212	-191	-8	-21	-119	-114	-95
20		-382	-76	-297	0	-51	+42	+204	+85	-127	-458	-687	-551	-220	-106	+106	+85	+64	+127	-21	+8	-191	-208	-89	-170	-121
21		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		-153	-123	-93	+47	-297	+297	+254	-191	+212	-137	-382	-318	-488	-310	+85	0	+577	+365	-85	+594	+721	-297	-339	+42	0
24		-1442	+1018	0	-382	-170	-42	+233	+360	+64	-488	-530	-488	-360	-318	-85	+85	+76	+21	-42	-85	-148	-85	-64	-85	-123
25		-466	-382	-42	-148	+170	-85	+42	+212	+335	+76	-432	-466	-449	-297	-191	-85	-102	-72	-123	-136	-127	-148	-136	-314	-140
26		-170	-144	-148	-148	-127	-76	+123	+242	+216	0	-572	-912	-615	-305	0	+212	+382	+42	-263	-127	-161	+170	-127	-403	-121
27		-276	-148	-191	+114	0	-136	+42	+390	+170	-165	-318	-488	-632	-560	-233	+293	-106	-85	0	-76	-102	+42	-127	-242	-118
28	X	-212	+30	-424	+64	+21	+42	+157	+212	+85	-106	-424	-551	-585	-424	-42	+85	+360	+93	+64	0	-85	-106	-119	-106	-82
29	X	-85	-76	-55	-85	-64	-254	+178	+136	+42	+127	-259	-555	-437	-466	-263	-21	+89	+127	0	-85	-85	-127	-64	-55	-97
30	X	-85	-127	-123	-170	-106	0	0	+136	+136	-76	-331	-543	-424	-339	-178	-42	-85	-21	+21	-136	-85	-106	-85	-42	-117
31	X	-47	+42	-136	-72	-42	-42	+34	0	+21	-212	-298	-119	-254	-157	-68	-254	-191	-170	-174	-93	-85	-42	-127	-127	-108
MEANS ALL DAYS		-211	-54	-132	-45	-48	+4	+121	+159	+32	-218	-446	-484	-410	-289	-116	-7	+97	+92	-23	-104	-73	-95	-109	-132	-104
MEANS 10 DAYS		-132	-59	-155	-51	-22	-26	+134	+172	+18	-166	-389	-490	-448	-354	-155	-67	+78	+86	-17	-68	-81	-76	-98	-98	-103

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										93.9 DIRECTION										E 0° 5' N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																									
1		- 65	- 40	- 73	- 54	-183	+ 73	- 59	- 81	- 30	-328	-113	+105	- 54	+188	- 38	-148	+309	+ 40	- 27	-256	- 54	- 78	0	-134	- 46																									
2		0	+ 13	-191	+ 13	- 46	- 27	+ 27	+175	+ 73	-269	-274	-140	- 27	- 40	- 54	+132	+194	+ 67	-108	-377	-242	-188	0	+ 13	- 53																									
3		- 81	-134	- 27	+ 40	+ 54	- 54	0	+ 27	+ 27	- 54	-108	+ 94	+105	+132	+ 54	+ 13	- 81	-108	-175	- 27	+140	-134	-108	-148	- 23																									
4		- 67	-108	-159	-161	+ 67	+ 54	+245	+242	-210	-253	-134	-215	+ 35	+ 54	+ 94	+ 40	+ 94	+ 19	0	0	+ 67	-242	+ 54	-183	- 28																									
5		- 43	- 67	- 86	- 62	+ 27	+ 8	+ 54	+ 75	+ 40	-210	-274	-433	-323	-140	- 83	+ 81	+223	+229	+ 46	- 43	+134	-242	+ 65	-175	- 54																									
6	X	- 54	- 27	-229	+ 81	+148	+ 94	+ 81	+215	+242	- 54	-269	-568	-441	-247	- 97	+108	+247	+245	+129	- 40	- 54	- 94	-202	- 81	- 36																									
7	X	- 75	+ 54	- 27	-140	+ 89	+ 27	+132	+140	0	-210	-242	-299	-309	-237	+ 54	+ 19	+202	+269	+ 27	-215	- 40	- 19	+ 27	0	- 32																									
8		- 48	- 48	- 78	- 27	-108	-100	+ 5	+132	+126	-277	-242	-336	..	..	..	..	..	..	..	..	..	..	..	..	..												
9		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	..	..	..	..	+242	+148	-121	0	+132	+143	+ 32	0	-102	- 81	- 81	-108	-108	..														
11	X	-215	-108	+ 40	+ 54	+ 40	-247	+ 54	+215	-188	-202	0	+180	+ 48	-231	-172	-121	+148	+229	0	- 27	0	+100	- 54	-269	- 30																									
12	X	0	- 19	- 40	- 35	- 27	-102	0	+ 54	+ 27	-161	-108	- 27	+ 54	- 40	+ 68	0	+114	- 28	- 75	-108	- 69	- 97	-125	- 53	- 32																									
13	X	- 69	- 28	- 89	- 83	- 42	- 50	+ 28	+152	+152	- 42	- 64	-222	-283	-158	- 14	0	+ 69	+111	0	- 50	- 55	0	+ 97	+152	- 20																									
14	X	- 28	-133	- 97	- 14	- 69	- 78	- 50	+ 69	+125	+ 42	-222	-277	-141	- 42	+ 47	+ 86	+ 33	- 80	-108	- 69	- 83	- 36	-111	0	- 52																									
15		-166	+ 28	- 28	- 28	- 69	- 69	- 50	- 55	+111	+125	-111	-136	+224	-205	- 86	- 89	0	-199	-208	- 53	+194	..	..	..	..																					
16		..	..	..	..	..	..	..	..	+388	-501	-357	-319	-222	- 83	- 14	- 28	+ 83	-108	0	-144	-202	+111	-111	-133	..																	
17		+ 22	-194	-194	+ 69	- 55	+136	-152	+ 42	+ 28	+ 28	0	- 69	- 97	+ 28	- 69	+194	+111	+499	+330	-263	- 42	-138	-249	-180	- 9																									
18		-249	+138	-152	+125	+ 83	-222	+ 42	- 28	+ 28	+ 47	- 69	+ 42	+125	-138	-152	-161	+ 28	+111	+152	0	- 28	- 8	- 55	-222	- 23																									
19		-180	+ 58	- 28	+ 42	0	- 61	- 64	+ 69	+ 28	0	- 97	- 86	-111	-130	+ 83	0	+ 69	+125	-197	- 94	- 69	+138	0	- 36	- 23																									
20		-271	- 14	-305	+ 55	- 55	- 55	+ 97	+125	+ 30	-310	-277	-222	+ 33	+ 19	+152	+ 8	0	+111	+ 6	+ 61	-197	-108	- 83	-208	- 59																									
21		- 28	- 66	- 55	-152	- 58	- 33	- 55	+ 75	+ 42	- 28	- 80	- 66	- 75	-205	-199	- 83	+ 97	+172	+152	+197	+152	-169	+ 28	- 19	- 32																									
22		- 69	- 69	-180	-125	-125	- 89	+ 28	+116	+ 69	-125	-277	-263	-180	+ 97	+ 55	+111	+152	+194	- 14	-144	-108	-108	- 14	- 28	- 39																									
23		- 97	-133	-138	- 83	-166	0	+307	-138	+277	0	-194	-161	- 69	-138	+360	+499	+310	+180	-249	+416	-166	+307	-235	- 55	+ 26																									
24		-1053	+859	+249	-235	0	+ 42	+114	+249	+402	-554	-346	-180	0	-125	- 33	+194	+166	+ 33	- 42	- 55	- 55	- 14	+ 19	- 42	- 17																									
25		-416	-194	+ 72	- 28	+ 42	- 28	- 55	+305	+263	+166	-175	-208	-133	- 42	+ 19	+ 83	- 58	- 78	- 83	- 83	- 55	- 83	- 28	-258	- 44																									
26		- 42	- 83	- 80	- 97	-125	-108	+ 42	+305	+319	+126	-471	-604	-305	-114	+138	+360	+582	- 28	-224	-152	-119	+305	- 42	-388	- 34																									
27		-194	- 86	-277	+ 47	+ 89	- 78	- 28	+266	+ 42	0	- 36	-136	-125	-244	+ 61	+169	-222	-136	+ 14	0	- 22	+ 33	0	- 14	- 37																									
28	X	-208	+ 86	-277	+169	0	- 42	+ 33	+ 97	+125	+ 55	- 97	-138	-221	-207	- 6	0	+ 83	- 55	+ 41	-628	- 80	- 97	-124	- 83	- 38																									
29	X	- 28	- 55	- 47	- 58	- 19	- 97	+ 88	- 14	+ 28	+193	- 28	-246	-102	-166	- 55	+ 55	0	+ 97	0	- 83	- 75	-116	- 14	- 33	- 32																									
30	X	- 75	- 61	- 58	-124	- 28	+ 28	0	+ 28	+ 88	+ 28	-138	-248	-146	-110	- 97	- 19	- 41	+ 28	+ 83	- 69	- 28	- 86	- 98	- 28	- 48																									
31	X	- 72	- 97	- 83	- 69	- 14	-110	- 69	+ 33	+ 80	-246	-160	+144	- 14	+ 88	+ 69	-168	-144	- 83	-124	- 50	- 33	- 50	- 47	- 80	- 54																									
MEANS		-141	- 20	- 97	- 32	- 14	- 39	+ 32	+108	+ 81	- 91	-167	-163	-106	- 83	+ 7	+ 54	+102	+ 82	- 9	- 53	- 59	- 47	- 50	- 97	- 33																									
ALL DAYS																																																			
MEANS		- 82	- 39	- 91	- 22	+ 8	- 58	+ 30	+ 94	+ 68	- 60	-133	-170	-156	-135	- 20	- 4	+ 71	+ 73	- 3	- 68	- 52	- 50	- 64	- 46	- 39																									
0 DAYS																																																			

* = 10 LEAST DISTURBED DAYS

TABLE 93

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LENGTH IN KMS 56.8										DIRECTION N 19° 5 E										
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN				
1	X	-114	-42	-110	-42	-42	-42	+97	+241	0	-444	-706	-601	-385	-127	+55	+165	+85	-127	-250	-178	-127	-254	-127	-85	-131				
2	X	-89	-85	-42	-21	-63	+55	+169	+212	-42	-309	-436	-550	-415	-292	+25	-76	-42	-93	-161	-89	-148	-76	-80	-190	-117				
3	X	-85	-123	-106	-76	-42	-42	-93	-127	0	-296	-347	-330	-338	-262	-80	0	0	-106	-203	-173	-135	-148	-127	-131	-140				
4		-85	-85	-47	-42	-21	0	+127	+343	+190	-423	-668	-647	-465	-212	-76	+51	+118	+63	-85	-123	-123	-169	+63	+254	-86				
5		+106	+190	+21	-85	+97	-994	+444	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	..	..	..	-296	-402	-592	-423	-254	-212	-161	0	+106	+42	-97	-135	-296	-169	..
7	X	-241	-135	-76	+42	-127	+8	+220	+360	+275	-296	-613	-804	-647	-372	-127	+106	+85	+34	+123	-169	-51	-190	-127	-178	-121				
8	X	-144	-123	-169	-63	+51	-85	+173	+338	+296	-212	-525	-668	-774	-550	-275	0	+262	+123	-80	-165	-106	-85	-42	-80	-121				
9	X	-131	-123	-76	-123	-106	-30	+169	+431	+300	-212	-825	-728	-630	-499	-233	0	+169	+85	0	+34	-178	-123	-106	-55	-125				
10	X	-85	-76	-76	-55	-21	-21	+148	+338	+241	-212	-457	-592	-761	-550	-296	0	+123	+13	0	-123	-76	-34	0	+42	-105				
11	X	-127	-89	-76	-118	-135	-72	+169	+279	0	-465	-719	-592	-529	-296	-21	+169	+89	-8	-89	-127	-118	-114	-118	-97	-134				
12		-97	-97	-85	-76	-76	-38	+76	+118	-127	-554	-804	-634	-254	-127	-21	+161	+63	+42	-135	-114	-76	-123	-148	-186	-138				
13		-42	-343	+334	+296	+389	-85	+85	+85	-85	-558	-317	-402	-148	-258	+106	+212	+127	-237	0	+423	-300	-338	-161	-42	-52				
14		-85	-127	-42	-85	-275	-21	-42	0	+21	-152	-317	-288	-317	-169	+127	0	-80	-169	-63	-169	-131	-250	+114	-89	-109				
15		-385	-338	+131	+42	0	0	+131	+220	-106	-465	-563	-385	-385	-250	-144	+203	+114	0	-76	-199	-152	-148	-106	-118	-124				
16		-423	+106	-42	-55	-21	0	+85	+300	0	-381	-571	-546	-431	-360	+30	+203	+178	-89	-233	+85	-216	-55	-381	+317	-104				
17		-127	-529	+148	-55	-118	+63	+42	+381	+212	-317	-338	-410	-431	-338	-207	-76	+42	-42	-135	-245	-85	-110	+233	+212	-93				
18		-212	-233	-152	-123	-85	-42	+343	+360	-212	-296	-550	-740	-254	-169	-123	-63	+360	+106	+63	-42	-254	-343	-296	-338	-137				
19		-76	-250	-207	-148	-42	-212	+190	+347	+157	-148	-385	-431	-423	-360	-296	-85	+63	+21	+21	-135	-63	-127	-220	-423	-135				
20		-72	-76	+42	-148	0	-85	+106	+338	+182	-296	-643	-618	-512	-592	+338	+169	+241	+169	+330	-127	+93	-360	+76	-613	-86				
21		+135	-148	-360	-550	-389	+241	+212	+474	+220	-376	-529	-444	-63	-343	-254	-131	+21	0	-148	-305	-203	-135	-212	-42	-139				
22		0	-169	+63	-233	+42	0	+178	+224	0	-250	-444	-486	-457	-258	-135	-127	-148	-93	-127	-165	-106	-182	-161	-85	-130				
23		-190	-402	+223	+135	+127	+106	+216	-55	+212	-254	-423	-415	-470	-169	+106	-42	+30	+76	+63	+190	-131	-275	-169	-169	-62				
24		-190	-169	+465	-165	-296	+254	+288	+296	+266	-529	-461	-402	-381	-334	-63	+123	+275	-51	+106	-233	+102	+275	-338	-21	-49				
25		-529	+85	0	-127	-85	+13	+131	+207	0	-317	-431	-423	-381	-423	-338	0	+85	+254	+85	-296	-89	-275	-106	-85	-127				
26		-212	+85	-165	+63	0	-233	+207	+123	-63	-376	-465	-444	-282	-127	+63	+42	+42	-51	-190	-123	+233	-63	-85	+42	-82				
27		-127	0	-550	+85	-42	0	+169	+338	+254	-110	-423	-546	-347	-245	-190	-76	-42	-42	-85	-127	-76	-85	-76	+21	-97				
28	X	-76	-114	0	0	-21	0	+169	+241	+123	-338	-516	-529	-423	-254	-106	-131	+89	+51	-165	-55	-51	-34	+85	-85	-89				
29	X	+76	-76	-47	0	+34	+34	+106	+190	+85	-220	-381	-389	-334	-233	-131	-127	-127	-114	0	-118	-63	-131	-21	-106	-87				
30		+21	-21	-97	-63	-106	-76	-127	+330	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31		..	..	..	..	..	..	..	+275	-233	-486	-486	-423	-381	..	..	-127	-76	-148	-254	-42	+42	-42	-42	-85	..
MEANS ALL DAYS		-138	-136	-30	-61	-51	-9	+143	+245	+89	-326	-513	-520	-415	-303	-84	+25	+82	-7	-53	-106	-97	-146	-98	-86	-108				
MEANS 10 DAYS		-102	-99	-78	-46	-47	-20	+133	+250	+128	-300	-552	-578	-524	-344	-119	+11	+73	-14	-82	-116	-105	-119	-66	-97	-117				

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0° 5' N									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1	X	- 82	- 16	- 69	- 69	- 38	- 55	+ 28	+ 234	- 28	- 280	- 316	- 179	- 69	+ 82	+ 162	+ 165	+ 104	- 82	- 162	- 143	- 80	- 170	- 55	- 41	- 48			
2	X	- 55	- 55	+ 14	+ 28	- 28	+ 69	+ 77	+ 143	+ 69	- 60	- 110	- 220	- 69	- 14	+ 234	- 50	- 41	- 110	- 107	- 41	- 41	0	- 14	- 179	- 23			
3	X	- 22	- 110	- 82	- 55	0	- 66	+ 6	+ 104	+ 82	- 41	- 38	+ 6	- 50	- 28	+ 28	- 44	- 82	- 110	- 110	- 104	- 69	- 99	- 60	- 77	- 43			
4		- 55	- 77	- 47	- 28	- 30	- 58	0	+ 270	+ 220	- 110	- 124	- 206	- 248	- 190	- 91	+ 28	+ 192	+ 82	- 60	- 28	- 41	- 173	+ 110	+ 385	- 12			
5		+ 192	+ 110	+ 138	- 248	- 82	- 742	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	..	..	..	+ 124	+ 28	- 275	- 399	- 305	- 249	- 138	+ 88	+ 192	- 138	+ 69	0	- 275	0	..
7	X	- 138	- 96	0	+ 44	0	0	+ 77	+ 165	+ 302	- 28	- 302	- 385	- 302	- 220	0	+ 124	- 14	- 124	+ 165	- 165	+ 28	- 165	- 165	- 96	- 54			
8	X	- 124	- 82	- 96	- 55	+ 28	- 60	+ 82	+ 250	+ 327	+ 248	- 165	- 311	- 437	- 344	- 187	+ 28	+ 297	+ 82	- 66	- 82	- 28	- 28	+ 55	- 28	- 29			
9	X	- 69	- 44	- 55	- 41	- 28	- 14	+ 47	+ 330	+ 324	+ 82	- 352	- 412	- 358	- 192	- 96	- 55	- 36	- 50	+ 28	- 50	- 124	- 82	- 55	0	- 54			
10	X	- 41	- 33	- 36	- 19	+ 6	- 91	0	+ 138	+ 129	- 19	- 30	- 168	- 360	- 275	- 195	- 69	- 6	- 14	- 82	+ 14	- 33	+ 14	+ 91	+ 82	- 42			
11	X	- 19	- 11	- 28	- 80	- 107	- 50	+ 50	+ 69	+ 28	- 148	- 223	- 146	- 261	- 151	0	+ 96	+ 36	- 28	- 55	- 63	- 69	- 28	- 47	- 30	- 53			
12		- 44	- 55	- 58	- 41	- 52	- 55	- 22	+ 151	- 28	- 270	- 412	- 412	- 138	0	+ 118	+ 110	+ 110	+ 96	- 80	- 82	- 82	- 138	- 124	- 173	- 70			
13		- 55	- 358	+ 110	+ 371	+ 358	- 55	+ 138	+ 220	- 69	- 275	- 74	- 192	+ 468	- 151	+ 116	+ 440	0	- 333	+ 138	+ 275	- 385	- 220	- 135	- 170	+ 7			
14		+ 102	+ 69	+ 28	- 69	- 110	- 116	+ 55	+ 28	+ 22	+ 88	- 138	- 96	- 88	+ 28	+ 206	- 41	- 82	- 135	- 28	- 138	- 55	- 275	+ 248	- 14	- 21			
15		- 302	- 275	+ 96	+ 14	- 36	0	+ 107	+ 124	0	- 138	- 116	- 77	- 388	- 308	- 138	+ 275	+ 143	+ 96	0	- 96	- 198	- 55	- 33	- 55	- 57			
16		- 220	+ 55	- 28	- 41	0	- 19	+ 60	+ 206	+ 165	- 41	- 165	- 275	- 275	..	0	+ 143	+ 110	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19		..	..	..	..	..	..	..	..	+ 124	+ 69	- 28	- 116	- 160	- 110	- 220	- 165	+ 14	+ 55	00	- 110	- 41	- 28	- 248	- 275	..
20		+ 69	- 63	+ 77	- 220	- 60	+ 28	- 132	+ 157	+ 165	- 69	- 82	- 82	- 275	- 440	+ 440	+ 192	+ 96	+ 116	+ 88	- 82	+ 151	- 358	+ 165	- 660	- 32			
21		+ 253	- 28	- 220	- 289	+ 187	+ 371	- 165	+ 192	+ 358	+ 82	- 248	- 253	+ 302	- 344	- 275	- 170	+ 55	- 138	- 192	- 132	- 69	- 118	- 110	+ 19	- 39			
22		+ 41	- 28	+ 110	- 179	+ 41	- 60	+ 55	+ 179	+ 96	+ 14	- 143	- 204	- 248	- 165	- 124	- 165	- 179	- 96	- 77	- 60	- 14	- 110	- 69	- 28	- 59			
23		- 124	- 324	+ 358	+ 138	+ 55	0	+ 102	- 55	+ 96	+ 107	- 110	+ 14	- 275	+ 28	+ 138	- 151	- 110	- 14	+ 94	+ 138	- 55	- 220	- 110	- 124	- 17			
24		- 55	- 248	+ 522	- 110	- 220	+ 28	+ 69	+ 275	+ 330	- 138	+ 55	0	- 41	- 248	- 124	+ 118	0	- 55	- 110	- 110	+ 116	+ 151	- 371	+ 33	- 6			
25		- 82	+ 129	+ 74	- 55	- 74	- 135	- 91	+ 201	+ 58	- 212	- 217	- 245	- 220	- 270	- 289	0	+ 96	+ 305	+ 36	- 110	- 82	- 165	- 58	- 250	- 69			
26		- 99	+ 192	- 192	+ 91	+ 58	- 96	- 33	0	- 96	- 69	- 248	- 198	- 28	- 55	0	- 28	+ 28	0	- 138	- 85	+ 28	+ 55	- 69	+ 124	- 36			
27		- 85	+ 33	- 385	+ 28	- 132	- 85	0	+ 261	+ 226	+ 36	- 124	- 162	- 52	- 41	- 146	- 102	- 124	- 55	- 113	- 82	- 41	- 55	- 30	+ 28	- 50			
28	X	- 47	- 110	+ 8	0	- 60	- 14	+ 55	+ 82	+ 88	- 82	- 138	- 192	- 192	+ 168	- 85	- 138	+ 55	+ 110	- 138	- 55	- 28	- 11	+ 132	- 275	- 36			
29	X	+ 124	- 30	- 50	0	+ 28	0	+ 22	+ 110	+ 138	0	- 82	- 116	- 110	- 110	- 74	- 116	- 129	- 82	+ 30	- 82	- 85	- 41	+ 30	- 69	- 29			
30		+ 28	- 55	- 50	- 66	- 85	- 96	0	+ 275	+ 302	- 82	- 289	- 468	- 324	- 138	- 50	- 50	- 82	+ 55	- 33	- 28	0	0	- 8	- 47	- 54			
31		- 44	- 47	- 58	+ 33	- 55	- 28	+ 179	+ 275	- 14	- 220	- 192	- 124	- 135	- 96	- 36	- 170	- 165	- 143	0	+ 129	+ 165	0	- 55	- 132	- 39			
MEANS ALL DAYS		- 37	- 69	- 1	- 25	- 14	- 26	+ 28	+ 167	+ 125	- 63	- 169	- 193	- 156	- 139	- 19	+ 9	+ 6	- 25	- 39	- 50	- 44	- 92	- 29	- 71	- 39			
MEANS 10 DAYS		- 47	- 58	- 38	- 25	- 20	- 28	+ 44	+ 162	+ 146	- 33	- 176	- 212	- 221	- 108	- 21	- 6	+ 18	- 41	- 50	- 77	- 17	- 61	- 9	- 71	- 41			

★ = 10 LEAST DISTURBED DAYS

TABLE 95

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LINE	OM	LENGTH IN KMS										56.8										DIRECTION N 19° 5' E									
		NORTHERLY																																									
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																			
1	- 42	+ 42	- 55	+ 81	+ 17	+ 55	+466	+551	+ 68	-424	-695	-517	-229	+ 21	0	- 42	- 42	-148	-208	- 64	- 64	- 21	- 72	-220	- 64																		
2	- 25	-348	+178	0	- 17	+ 64	+212	+242	-170	-416	-589	-424	-136	- 42	0	+165	-170	-259	-195	- 68	- 85	- 89	- 81	- 89	- 98																		
3	X	-233	- 21	- 21	+ 8	- 68	+ 55	+276	+394	+ 42	-339	-598	-615	-377	- 89	- 47	- 64	- 42	- 81	- 8	- 72	- 38	0	+ 42	- 85	- 83																	
4	X	-250	- 42	- 13	- 38	- 42	+ 42	+242	+437	+ 85	-509	-640	-522	-416	-165	- 81	- 42	- 81	-178	- 85	- 42	- 59	-170	-170	- 51	-116																	
5	X	- 51	- 51	- 85	- 81	+ 30	+ 81	+123	+212	+ 30	-373	-683	-674	-538	-318	+127	+148	+131	0	- 64	- 47	- 38	- 21	-191	- 55	-100																	
6	X	- 72	-148	-106	+ 30	- 8	- 4	+123	+314	+208	-170	-555	-678	-424	-335	- 81	- 85	- 89	- 21	- 89	+ 42	+ 85	-114	- 89	- 55	- 97																	
7	X	-220	- 81	+ 51	- 30	- 55	+ 59	+220	+250	+ 30	-216	-301	-356	-377	-212	-127	- 38	-161	-161	-174	+106	- 76	+106	- 93	-123	- 82																	
8	0	-678	+293	- 8	- 42	- 42	+ 21	+170	+ 8	-110	-339	-382	-373	-204	-509	0	- 47	- 34	- 38	-204	+ 76	+1395	+145	+187	+ 54																		
9	+848	0	1060	0	-191	-182	-678	-276	0	- 85	- 59	-276	-382	-297	+ 21	-123	+170	+212	+310	+509	-339	- 64	-848	0	-116																		
10	-174	-636	-165	- 76	+ 21	+ 85	+199	+339	0	- 85	-297	-424	-335	-174	- 21	+ 21	- 42	-140	- 85	-170	-114	-170	-123	- 42	-109																		
11	0	+ 42	+ 42	-127	-276	-305	+148	+254	+ 85	-208	-212	-254	-263	-254	-170	- 21	+212	-170	+ 72	+369	-106	- 42	- 85	-259	- 64																		
12	-509	-106	+170	- 4	-233	- 21	+ 64	+233	+ 42	-254	-403	-424	-318	-127	0	+ 42	- 21	-123	-127	- 85	-123	-165	-140	-127	-115																		
13	- 85	-110	-148	-382	-301	+ 81	+ 64	+551	-1102	-339	-644	+ 85	+763	-170	+ 30	+191	+250	+530	-148	-488	-127	-127	0	- 42	- 70																		
14	-382	- 47	-721	+ 64	-212	+339	+254	+254	- 85	-615	-339	-666	-178	+ 21	+127	+305	+ 30	+254	-339	+157	+975	+276	+297	-488	- 30																		
15	-339	- 85	-644	-293	+199	-382	-297	+233	- 42	-382	-233	-539	-220	- 21	+208	+199	0	- 85	+ 8	-127	-242	-382	-191	+ 85	-140																		
16	- 64	+127	-678	+254	+254	- 42	+170	+170	0	-127	-594	-615	-343	0	+479	+ 30	- 47	-170	+216	-114	-131	-123	-165	-212	- 72																		
17	-382	+119	- 8	-254	- 42	+ 42	+254	+204	+ 72	-377	-505	-471	-204	0	-204	+ 21	- 47	- 89	+509	+360	-127	-424	-276	-204	- 85																		
18	- 42	-681	+250	-382	+ 85	+148	+339	+352	+ 34	-254	-331	-293	-284	-106	0	0	- 13	-123	-178	+ 42	- 51	-255	-233	- 93	- 82																		
19	-110	-403	+127	+ 34	+ 42	- 42	+382	+505	+ 64	-678	-657	-700	-589	- 13	+331	+ 42	+636	- 85	-233	-288	+297	-276	-170	- 85	- 78																		
20	- 55	-106	- 85	- 42	+ 30	+ 72	+301	+170	- 76	-276	-522	-721	-424	-106	+ 64	+127	+106	+301	-148	+339	-165	-191	-136	-178	- 72																		
21	-208	-127	-106	-382	+127	+123	+242	+106	+165	- 42	-339	-615	-649	-335	+ 64	- 21	- 72	+136	+445	-170	-233	-127	-127	-114	- 94																		
22	X	-178	-250	+ 13	-106	-220	+170	+233	+220	+106	-123	-259	-458	-390	-250	-106	+ 85	+106	- 76	+ 42	- 76	- 89	- 38	+ 51	+ 76	- 63																	
23	X	-526	+ 8	0	- 85	-106	- 55	+ 85	+ 51	-114	-233	-466	-416	-352	-195	+ 51	+254	+ 42	0	- 42	- 89	-225	- 93	- 42	+106	-102																	
24	X	-114	-403	0	- 85	- 64	- 42	+ 34	+106	-174	-127	-259	-288	-293	-250	-174	-136	+ 51	+ 76	+ 21	+ 64	- 76	-178	- 47	- 47	-100																	
25	X	- 64	-170	-199	-131	+ 8	-216	+ 64	+ 85	0	+ 85	- 42	-606	-432	-297	-233	0	- 34	- 34	- 72	+ 59	+ 42	+ 13	- 34	- 96																		
26	- 85	- 85	-212	-220	- 64	- 13	+170	+ 42	+ 81	- 42	-343	-339	-293	-191	+ 85	-305	-182	-208	+ 30	- 42	- 85	+191	+136	- 42	- 84																		
27	+ 21	- 47	-123	- 85	-127	- 76	+127	0	- 42	-127	-297	-259	-170	-254	- 42	+ 42	-106	+178	+ 85	- 85	- 85	- 64	- 55	- 76	- 69																		
28	-123	-208	-161	-157	-119	- 34	0	0	0	- 85	-335	-254	-170	- 42	-220	+488	+ 76	-246	- 76	-191	-131	+ 55	-114	-204	- 94																		
29	0	- 42	0	- 76	- 34	0	+ 76	+ 89	0	-297	-191	-297	-288	-119	0	0	- 76	-165	- 76	- 72	- 47	- 68	- 47	- 72	- 75																		
30	X	- 76	- 13	- 81	- 13	- 72	+ 64	- 21	0	- 76	-225	-339	- 98	-127	- 42	-127	- 85	- 85	- 81	- 76	- 55	-131	-136	-106	- 83																		
MEANS ALL DAYS	-118	-148	-118	- 86	- 49	+ 1	+130	+209	- 23	-243	-398	-438	-295	-155	- 16	+ 39	+ 15	- 33	- 24	- 17	- 48	- 45	- 65	- 55	- 83																		
MEANS 10 DAYS	-178	-117	- 44	- 53	- 60	+ 15	+138	+207	+ 21	-208	-403	-495	-376	-224	- 71	0	- 16	- 56	- 55	- 13	- 53	- 68	- 66	- 37	- 92																		

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1933
 EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
 SEPTEMBER 1933

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-100	-29	-80	+57	-54	0	+360	+372	+194	-83	-360	-312	-86	+60	+29	-143	-103	-89	-34	-106	+112	+37	-14	-197	-24						
2		-83	-449	+200	-23	-83	+49	+114	+186	0	-66	-280	-186	-69	+43	+72	+272	-232	-235	-83	+23	-54	-14	-149	-134	-49						
3	X	-77	+23	-23	-23	-37	+6	+140	+309	+143	-83	-235	-280	-112	+57	-23	-120	-114	-112	-14	0	+57	+117	+74	+14	-13						
4	X	-177	-51	-29	-40	-72	-14	+140	+317	+240	-114	-200	-143	-203	-34	-57	-114	-92	-232	-92	0	-112	-149	-140	0	-57						
5	X	-29	-31	-72	-86	+23	+60	+43	+143	+86	-177	-346	-366	-340	-200	+129	+86	+92	0	0	-23	0	+51	-140	+14	-45						
6	X	-206	-86	-23	+57	-23	-51	+9	+223	+172	-40	-249	-300	-169	-114	+43	-134	-114	-29	-83	+106	+57	0	-51	0	-42						
7	X	-229	+57	+94	-26	-43	+54	+92	+180	+157	+23	0	-29	-83	-29	-43	-83	-255	-114	-174	+57	+63	+86	+80	-23	-8						
8		+29	-629	+320	0	+14	+57	+17	+112	+172	+143	0	0	-223	-143	-400	-89	-57	-57	+43	-257	+243	+1344	+115	+1030	+116						
9		+486	-143	+572	+286	-143	-272	-257	-257	-57	+140	+149	-106	-174	-129	+57	-172	+197	+140	+29	+486	+315	+229	-795	+315	+37						
10		-29	-329	-157	-29	+137	-14	+77	+163	0	+149	-57	-169	-172	-86	-57	0	-29	-114	-172	-109	-174	-66	-134	+123	-50						
11		-117	+286	+114	-43	-100	-212	+134	+214	+200	+29	+57	-29	-114	-200	-197	-57	+223	-172	+197	+332	-400	+272	+129	-97	+19						
12		-229	-129	+51	+72	-137	+100	-51	+149	+172	-51	-243	-312	-214	-114	-29	+23	+57	-14	-60	-60	-114	-63	-66	-77	-56						
13		0	-72	-72	-286	-429	+112	-86	+967	-343	0	-489	+29	+1058	-72	-57	+214	+174	+772	-460	-323	-120	-20	-20	+26	+21						
14		-263	-86	-452	+29	-149	0	+86	+280	0	-143	+114	-541	-157	-43	+189	+260	-57	+43	-157	+255	-172	+715	+658	-114	+12						
15		-286	-60	-455	-349	+143	-137	-286	+143	+51	-40	+14	-157	-92	+43	+177	+166	-60	0	+92	-343	-157	-415	+23	+100	-79						
16		+43	+72	-458	+43	+129	-92	+114	+214	+163	+243	-372	-483	-286	+43	+515	-112	-117	-92	+172	-143	+29	0	-72	-200	-27						
17		-214	+40	-72	-203	-57	-77	+177	+214	+272	-100	-214	-257	+20	+117	-329	-100	-83	+57	+801	+486	-343	-300	-272	-129	-24						
18		-14	-343	+134	-186	+26	+206	+120	+300	+200	+9	0	-149	-249	-149	-163	-114	-29	+43	-120	-57	-29	-137	-109	-14	-34						
19		-14	-129	+34	-40	+6	0	+100	+372	+500	-317	-229	-489	-398	+57	+232	0	+429	-72	-100	-335	+86	-286	+172	-29	-19						
20		-14	-120	-137	-66	+29	+43	+197	+200	+83	+86	-143	-392	-232	-134	-137	-100	-29	+272	+20	+174	-43	-74	-43	-92	-27						
21		-172	-117	-183	-129	-137	0	+235	+100	+200	+169	-43	-232	-375	-337	-29	-237	-200	+186	+315	+40	-92	-43	-57	-43	-49						
22	X	-143	-172	-29	-83	-177	+43	+163	+229	+243	+89	0	-157	-203	-229	-166	-57	+97	+14	0	+14	-72	+49	+57	+14	-20						
23	X	-372	-72	+29	-86	-92	-57	+57	+112	-29	-143	-252	-177	-180	-72	+94	+200	+26	+100	0	-57	-149	-49	+29	+149	-41						
24	X	-129	-229	-57	-89	-34	-54	-57	+106	-80	-83	-152	-46	-83	-143	-160	-143	+86	+149	+120	+149	-57	-229	+29	+29	-48						
25	X	-14	-114	-197	-140	+29	-92	-34	-157	+214	+292	+329	-172	-317	-214	-120	0	-129	-72	-29	+89	+57	0	+112	-14	-29						
26		-29	-72	-172	-214	-29	-57	+77	+100	+94	+49	-129	-14	-57	-92	+169	-166	-260	-235	+57	-100	0	+232	-43	-83	-40						
27		+57	-57	-86	-100	-86	0	0	0	0	-3	-72	+72	+83	-137	0	+112	-86	+200	+63	+31	0	-43	-57	0	-9						
28		-69	-169	-137	-114	-43	-29	-14	-20	+23	-37	-203	+29	0	+86	-229	+337	+89	-257	-106	-152	-83	+149	-143	-163	-52						
29		+14	-114	+14	-43	-37	0	+92	+74	+112	-114	+86	0	-203	-140	0	0	-77	-83	-43	0	+14	0	-14	-43	-21						
30	X	-63	-40	-86	-14	-43	+92	+14	+172	+100	+43	-57	-72	+172	0	-86	-232	-86	-29	-43	-14	0	-29	-77	-40	-17						
MEANS ALL DAYS		-81	-112	-47	-62	-47	-14	+59	+184	+109	-4	-119	-181	-115	-77	-19	-17	-25	-1	+5	+5	+38	+46	+3	+11	-22						
MEANS 10 DAYS		-144	-72	-39	-53	-47	-1	+57	+163	+125	-18	-116	-174	-152	-98	-39	-60	-49	-32	-32	+32	-16	-15	-3	+14	-32						

* = 10 LEAST DISTURBED DAYS

TABLE 97

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1933
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
OCTOBER 1933
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LENGTH IN KMS 56.8										DIRECTION N 19° 5 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1		- 73	- 90	- 56	- 56	- 21	+ 30	+149	+269	+ 34	-132	-222	-278	-290	-290	-171	-115	- 73	- 94	- 77	+ 77	0	- 85	-132	+ 21	- 70			
2	X	-137	- 21	- 51	- 43	+ 47	- 43	+128	+222	+106	- 85	-320	-512	-346	-252	-179	-124	-158	-171	- 77	- 85	-106	- 90	-124	-124	-106			
3		-132	-124	- 90	- 85	- 81	- 9	+196	+342	+260	+ 64	-260	-551	-598	-363	-145	+ 21	+ 73	-124	- 51	- 9	+ 9	+128	+ 30	-235	- 72			
4		-171	-149	-179	-137	- 90	- 85	+ 85	+214	+286	-218	-256	-465	-350	-175	-171	+ 81	+179	+551	0	+260	+239	+167	-470	-243	- 43			
5		-474	- 51	-205	+214	-833	+427	+ 64	- 85	+205	+ 34	-106	-342	-410	-346	+145	-171	+ 77	+184	0	+380	+235	-307	-299	-214	- 96			
6		- 85	-1174	+106	+320	-179	- 85	+137	+214	+214	+171	-214	-504	-461	-299	- 43	- 43	0	- 21	+448	+504	-171	-235	+ 21	-982	- 98			
7		+555	-106	-329	-128	-427	- 43	0	+ 64	+256	+470	- 43	-726	-465	-106	+ 85	+214	- 90	+128	-376	+192	+256	-260	-231	-137	- 52			
8		-555	- 56	-769	+290	+171	-106	0	0	+128	+290	0	-376	-470	-363	-201	- 43	-120	- 43	+124	+201	+192	+256	-342	-149	- 81			
9		-512	-376	+278	-162	-179	-192	+106	+128	+137	+137	+ 51	-171	-214	-521	-201	+679	+214	+ 51	0	+ 43	-171	-214	-470	- 85	- 68			
10		+337	-299	-427	-342	+278	-167	0	+128	+ 51	+337	+ 51	-427	-248	-478	-222	- 85	+ 43	-214	0	+ 51	- 43	-124	- 34	-342	- 91			
11		+ 21	0	-106	-542	+128	0	-171	-106	- 21	0	- 47	-171	-167	-149	- 94	+256	+384	+713	-214	-299	-162	+162	+ 43	- 43	- 24			
12		- 94	-290	-175	-256	-491	-128	+106	+ 51	+ 34	-222	-252	-290	-205	-132	+ 77	- 43	- 90	-137	- 85	- 85	-120	- 85	- 51	- 94	-127			
13		- 47	- 43	+ 43	-384	+175	-149	+ 43	-854	+ 85	+ 43	+120	+ 81	+ 43	+149	0	0	+406	- 21	+299	-192	-320	-158	- 43	-265	- 41			
14		- 85	-120	-171	-521	- 43	+346	+440	+128	+ 85	-106	-132	-278	-290	- 64	-175	0	- 43	-128	- 34	-128	- 51	-248	-158	-120	- 79			
15	X	-132	- 68	-124	- 85	- 90	- 43	+124	+427	+222	-214	-295	-384	-149	-214	-120	-106	- 94	-111	0	- 77	-106	- 77	- 90	- 77	- 78			
16	X	-158	- 85	- 9	- 73	-137	-252	+ 90	+256	+342	+ 51	-214	-461	-470	-214	0	- 43	-128	- 94	- 51	- 81	-137	- 85	-124	-106	- 91			
17		-235	-158	- 43	- 64	-145	- 60	+ 47	+171	+307	-128	-512	-495	-312	+ 21	+ 30	+111	+120	+137	- 73	- 73	+128	+ 30	+320	-235	- 46			
18		+726	-867	-278	0	-175	-389	+ 51	+512	+273	+ 34	-312	-342	-363	-128	-171	-120	+ 51	+ 94	-201	- 21	- 60	-167	-149	-167	- 90			
19	X	-252	-137	- 85	- 85	-106	- 51	+ 21	+218	+278	- 21	-389	-517	-427	-214	- 90	0	+ 77	- 73	- 38	- 38	- 56	-124	- 85	-252	-102			
20	X	+265	-342	0	- 43	- 85	- 77	+ 77	+342	+393	+ 77	-222	-461	-555	-448	-406	-256	- 90	+ 77	- 21	- 21	- 38	- 43	- 81	-167	- 88			
21	X	-171	-132	- 77	- 64	+ 21	-106	+ 77	+193	+ 77	0	-376	-461	-406	-295	- 43	- 43	0	- 64	- 51	- 9	+ 77	- 51	- 43	- 90	- 85			
22	X	- 43	-640	0	- 90	- 81	0	- 90	+149	+214	+ 21	-226	-299	-418	-303	-171	- 90	- 51	- 47	- 38	- 21	- 85	- 98	-137	-128	-111			
23	X	-137	-128	-171	-171	- 51	- 43	+ 85	+171	+214	+ 30	-193	-342	-436	-337	-149	-252	+ 94	+ 43	+ 34	0	- 21	- 56	+ 21	- 90	- 79			
24		-239	- 90	- 81	-167	-124	+128	- 47	0	-256	- 43	-128	-427	-342	-128	-149	-299	-171	+171	+265	+167	+ 85	+ 64	+ 13	-171	- 82			
25		- 85	-547	-299	+243	- 43	- 43	+ 85	+512	+222	+120	-171	-470	-427	-380	-128	+ 43	-137	+ 64	-149	- 13	- 21	- 43	- 21	-555	- 93			
26		+265	+ 21	- 85	- 85	- 90	- 43	+ 73	+299	+243	-196	-320	-491	-491	-235	+226	-209	- 43	- 43	+ 94	+384	+ 47	+171	-149	-132	- 33			
27		-222	-354	- 77	-120	- 47	- 94	+ 43	+278	+252	+ 77	-286	-448	-457	-303	- 94	- 47	-137	0	+ 43	- 85	- 77	-137	- 90	-175	-107			
28	X	- 85	- 21	- 47	-209	- 90	+ 21	+128	+337	+175	-149	-260	-320	-290	-286	-106	-128	-106	- 77	- 64	+ 77	+ 56	-149	-145	- 94	- 83			
29	X	-106	- 85	- 81	- 64	0	+ 21	0	0	- 56	-106	-209	-342	-380	-209	- 81	0	- 9	- 30	- 47	- 51	- 64	- 94	-214	-128	- 97			
30		- 85	- 77	- 85	-158	-106	- 21	+ 56	+154	+ 21	-252	-427	-337	-299	-106	0	+ 43	- 51	- 43	- 43	- 68	- 85	-120	-115	-115	- 97			
31		- 77	-102	-132	- 60	- 43	- 21	0	+320	+193	-235	-427	-342	-303	-128	- 51	- 64	- 90	- 85	- 43	+ 34	- 21	+ 77	- 43	-235	- 78			
MEANS ALL DAYS		- 72	-216	-123	-115	- 95	- 41	+ 68	+163	+160	- 5	-213	-385	-355	-235	- 90	- 27	+ 1	+ 19	- 14	+ 28	- 17	- 64	-109	-191	- 80			
MEANS 10 DAYS		- 95	-176	- 68	- 97	- 70	- 54	+ 71	+244	+212	- 25	-264	-414	-413	-268	-131	- 90	- 23	- 50	- 33	- 38	- 37	- 65	- 87	-137	- 85			

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD			LINE OW										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N										
DAY	*		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1			- 52	- 86	- 57	- 52	- 14	+ 14	+ 83	+172	+100	- 14	- 43	- 57	-138	-250	-232	-146	- 43	-109	- 86	+109	+100	- 20	- 86	+166	- 31						
2			-207	- 23	0	- 69	- 29	- 20	+129	+215	+230	+112	0	-158	-149	-201	-221	-224	-253	-118	- 72	- 43	- 14	+ 14	- 34	- 57	- 50						
3	X		- 86	- 86	- 66	- 86	- 80	- 6	+ 80	+230	+316	+129	0	-201	-307	-230	-172	- 29	+ 57	- 23	- 17	+100	+95	+121	+149	-109	- 9						
4			-100	-100	-144	-146	-118	- 86	- 60	+ 86	+316	- 29	0	- 89	-115	- 63	-192	+201	+215	+560	- 72	+459	+273	+264	-402	-258	+ 17						
5			-264	-164	-126	0	-775	+405	0	- 86	+144	+ 86	+129	+ 34	-144	-244	+373	-287	+141	+230	0	- 86	+574	-204	-187	-138	- 25						
6			- 72	-861	+ 57	+287	+ 57	+ 83	- 57	+115	+172	+258	+ 57	-115	-181	-187	-100	- 29	0	0	+574	+459	- 57	-198	0	-574	- 13						
7			+445	-115	-172	+227	-207	- 86	0	+ 86	+287	+631	+603	-560	-333	+ 29	+ 57	+230	-144	-189	-287	+261	+ 86	- 29	- 52	- 57	+ 30						
8			-517	0	-344	+149	+100	0	0	+187	+198	+370	+244	- 86	-230	-287	-230	-129	-115	- 6	+287	+261	-144	+451	-198	- 43	- 3						
9			-459	-258	+ 57	- 57	+ 29	-118	+158	+ 86	+149	+230	+253	+373	0	-574	-330	+617	+221	+ 86	-488	+399	-212	- 92	-373	-100	- 17						
10			+201	- 43	-264	- 57	+158	- 72	+ 63	+172	+144	+545	+319	-201	-144	-459	-149	-135	-100	-198	+115	-115	+ 57	0	+ 63	-258	- 15						
11			-115	+201	- 29	-402	+ 52	+ 29	-129	0	- 52	+ 52	0	0	- 26	-106	- 43	+287	+537	+416	-316	-100	-230	+215	-344	+164	+ 3						
12			+ 57	-207	-144	-201	-261	- 43	+ 57	- 29	0	-115	- 72	- 57	- 77	-100	- 29	- 43	- 57	- 86	- 29	- 29	- 57	- 32	+ 29	- 29	- 65						
13			- 29	- 57	0	-405	+144	- 29	+ 86	-373	-264	-118	-115	+149	+201	+244	0	+ 86	+402	-230	- 57	+100	-232	- 83	+ 86	-330	- 34						
14			+ 29	- 43	- 57	-230	- 29	+ 86	+373	+ 29	+100	+ 29	+319	+ 29	-100	-144	-287	- 29	- 29	-115	-118	-115	-144	- 40	- 80	- 29	- 25						
15	X		- 57	- 29	- 60	- 57	- 52	+ 32	+ 57	+373	+258	+ 14	-146	-172	+ 57	-164	-146	- 57	- 77	- 86	0	- 86	0	+ 6	0	- 57	- 19						
16	X		- 86	0	+ 34	- 52	0	-187	- 43	+112	+316	+198	- 34	-201	-238	-129	0	- 29	-112	- 46	- 14	- 49	- 86	0	- 14	+ 32	- 26						
17			-172	-144	- 29	- 52	- 83	0	0	+201	+347	+126	-261	-261	-201	0	+ 14	+ 72	+172	+344	-230	- 86	+201	+ 86	- 57	+172	+ 7						
18			+517	-430	- 89	- 57	- 32	-144	+115	+319	+344	+129	- 29	- 29	-230	- 43	-215	-221	0	- 57	- 57	+ 29	- 14	- 86	- 57	- 52	- 16						
19	X		-129	- 86	- 52	- 80	- 89	- 32	0	+144	+258	+ 86	-227	-273	-258	-144	- 52	+ 57	+115	- 52	- 52	- 6	0	- 20	- 29	-370	- 54						
20	X		+319	-149	0	0	- 43	- 49	0	+187	+287	+204	+ 34	- 52	-201	-244	-316	-330	- 86	- 29	- 83	0	- 6	+ 14	0	-112	- 27						
21	X		- 72	- 86	- 29	0	+ 29	- 52	0	- 29	+ 32	+129	0	- 86	-146	-201	- 57	- 83	- 29	- 72	- 57	+ 29	+ 43	+ 29	+ 63	+ 43	- 25						
22	X		- 52	-430	+ 89	- 72	- 89	+ 29	+ 57	+ 29	+106	+115	+ 72	+ 43	-100	-146	-118	-121	- 83	- 57	- 26	+ 6	- 57	- 86	- 83	- 57	- 43						
23	X		- 29	- 52	- 89	-100	- 43	- 29	+ 43	+ 57	+ 86	+ 60	+ 60	0	-106	-175	-144	-201	+ 57	- 29	+ 14	0	- 29	+ 29	+ 77	- 29	- 26						
24			-201	- 29	- 29	-115	-129	+121	-172	+258	+115	0	+ 29	-201	0	+ 57	- 86	- 86	0	+172	+227	+ 86	+ 57	- 43	-230	- 29	- 10						
25			- 29	-313	-172	+129	- 29	- 29	+ 29	+258	+276	+232	- 57	-169	-187	-230	-172	0	-201	- 57	-195	+ 29	+ 34	- 43	+ 14	-430	- 55						
26			+430	+ 20	- 43	- 66	- 43	+ 57	+ 86	+255	+258	-158	- 86	-230	-215	- 57	+287	-379	-144	-115	+189	+387	- 29	+215	- 86	- 72	+ 29						
27			-158	-287	- 29	- 80	- 14	- 14	0	+144	+230	+141	- 83	-172	-255	-192	- 57	- 29	-109	+ 86	+ 57	0	- 80	-100	- 29	-172	- 50						
28	X		- 43	+ 72	- 29	-144	- 86	+ 37	+ 57	+201	+ 92	+ 60	- 23	- 80	-172	-201	-138	-201	-135	- 86	- 29	+ 29	+ 34	- 57	- 34	- 29	- 38						
29	X		- 29	- 29	- 46	- 26	0	+ 29	0	0	0	+ 63	+ 57	- 43	-235	-201	-149	- 57	0	+ 29	0	0	+ 6	+ 46	-121	- 43	- 30						
30			- 32	- 34	- 49	-135	-100	- 9	0	+ 92	- 43	- 57	..	..	..	..	..	..	..	..	- 32	- 34	- 40	- 52	- 43	- 37	..
31			- 14	- 43	-115	- 52	- 29	-141	- 52	+373	+250	0	-144	-100	-121	- 83	- 77	-112	-112	-118	- 32	+ 92	+ 86	+ 83	+ 80	+ 83	- 13						
MEANS ALL DAYS			- 32	-128	- 66	- 62	- 57	- 7	+ 33	+126	+169	+119	+ 29	- 99	-145	-158	- 99	- 47	+ 3	+ 2	- 28	+ 71	+ 8	+ 13	- 64	- 92	- 21						
MEANS 10 DAYS			- 26	- 88	- 25	- 62	- 45	- 23	+ 28	+130	+175	+106	- 21	-106	-171	-184	-129	-105	- 29	- 45	- 26	+ 2	0	+ 2	+ 1	- 73	- 30						
			* = 10 LEAST DISTURBED DAYS																														

* = 10 LEAST DISTURBED DAYS

TABLE 99

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1933

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY			LINE			OM			LENGTH IN KMS			56.8			DIRECTION			N 19° 5' E								
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+ 43	+ 64	-124	-226	+ 56	- 43	-256	+383	+290	- 43	-341	-426	-383	-192	- 98	- 21	+ 34	+ 34	+ 81	0	- 43	- 94	- 81	-264	- 69
2		- 21	-128	- 43	-490	+106	+ 43	+ 21	+149	+192	+ 72	-115	-469	-447	-256	- 47	+106	+ 17	0	+ 43	+102	+119	- 85	-256	- 34	- 59
3		- 85	-119	-469	- 43	- 34	0	- 85	+ 94	+ 43	- 81	- 30	- 21	-426	- 43	- 64	- 21	+ 85	+ 43	- 21	+128	- 43	-128	- 85	-149	- 64
4		-128	-383	-119	- 81	+ 21	- 30	-307	+115	+ 34	0	-204	-204	-128	0	- 94	+106	- 43	- 30	+ 21	- 21	- 64	+ 34	+ 77	-277	- 69
5		-341	- 43	- 85	-285	+ 56	+ 30	+ 30	+ 43	+204	0	- 64	-209	-392	-204	-247	- 77	- 72	0	+192	+473	+ 21	-469	+ 21	+ 94	- 55
6		-115	-234	-302	- 72	-226	- 72	-405	+788	-136	+375	+247	-285	- 43	+ 43	+106	- 34	+ 30	+332	+ 64	- 68	-256	-200	-149	-119	- 30
7		+213	+532	-230	-298	-298	+128	+128	-128	+277	+ 34	-320	+ 43	-213	+426	-405	-128	- 34	+170	+746	-469	- 47	-119	- 85	+ 34	- 2
8		-106	-426	-132	-128	-128	-132	-239	-158	- 77	-136	-162	- 21	0	+213	+132	-146	+337	-162	-175	+ 34	+243	- 34	+ 21	-809	- 81
9		+ 85	- 43	-396	- 43	-243	-290	+ 51	- 43	-183	-170	-141	-170	-209	+247	-251	0	0	0	0	0	+469	+ 85	-115	-264	- 68
10		- 43	-115	-136	-162	-307	-341	+ 21	- 85	+ 85	-115	-136	- 64	- 21	+ 34	+ 21	+170	+183	+ 34	+251	+ 85	-128	-239	+ 13	-217	- 50
11		- 34	-383	-618	+149	+ 43	-256	- 64	+ 13	- 89	-162	-128	-141	- 68	+128	+ 85	- 30	+ 13	+ 85	-256	-132	+ 51	- 98	-141	-119	- 90
12	X	-119	- 89	- 89	- 98	-149	0	- 51	0	- 47	+ 47	+ 34	- 51	-298	-226	-192	0	+128	+ 21	- 77	-119	- 85	- 43	- 34	-170	- 71
13	X	- 85	- 51	- 34	-162	- 43	- 34	+ 34	+200	+ 77	- 51	-124	-302	-268	-141	-162	-170	-170	-119	- 85	- 94	- 77	- 94	- 43	+162	- 76
14	X	-341	0	- 26	- 51	-149	- 94	+ 43	+132	+128	- 77	-213	-298	-243	- 85	- 85	- 98	- 34	+ 21	+ 21	+ 34	- 85	- 98	-106	-106	- 79
15	X	-124	-128	- 85	- 64	- 43	- 21	- 77	+ 43	+ 43	- 94	- 64	-222	-213	-119	- 21	- 47	- 85	- 21	0	+ 34	+ 85	+ 21	+ 13	- 77	- 53
16		- 43	0	- 89	-204	- 85	-213	+256	- 85	- 77	-149	-192	-200	-115	0	- 30	+ 34	0	0	+ 30	- 64	- 85	- 85	- 85	- 85	- 65
17		-106	-106	- 34	- 85	- 13	- 51	- 34	+ 43	0	- 51	-234	-383	-256	-128	0	+ 77	+ 85	+115	+128	+106	- 43	- 43	+43	+128	- 35
18		+222	+243	-183	-128	- 94	-183	-128	+192	+ 43	- 64	-239	-532	-234	-115	- 85	0	0	+ 21	+ 64	+ 43	+ 85	- 43	- 21	-106	- 52
19		-204	-170	-106	- 47	-213	+ 43	+ 21	+124	+ 21	- 77	-277	-371	-302	-128	- 64	+ 85	+175	+ 43	- 64	- 85	- 81	- 77	- 85	- 85	- 80
20		-141	- 98	-115	- 85	- 64	- 43	- 17	+ 21	0	-119	-179	-290	-362	- 21	- 72	0	+ 51	+ 89	+426	-187	- 64	- 89	- 77	-124	- 65
21		- 85	-162	-149	-111	- 34	- 21	- 21	+ 43	- 64	- 64	-119	-256	-277	-106	- 85	0	+ 47	+ 81	+ 89	-132	- 34	- 21	+ 85	-166	- 65
22	X	- 21	- 89	-124	-175	-149	- 43	- 43	+106	+ 43	0	- 77	-192	-290	-170	-132	- 85	- 30	+ 77	+ 21	+ 21	+ 85	+379	-320	-158	- 57
23	X	- 98	+ 47	-102	-128	-115	-106	0	+132	+213	0	-141	-311	-213	- 94	- 85	-222	- 94	0	- 34	- 43	- 43	- 77	- 21	- 94	- 68
24	X	-119	-106	-141	-106	- 94	- 77	- 34	+ 43	+ 64	+ 64	-115	-268	-222	-204	-162	-128	- 77	+ 72	- 43	- 47	- 64	- 34	- 47	- 85	- 80
25	X	- 85	- 98	-166	-132	-179	- 56	- 64	+ 85	+102	- 68	- 56	-124	-234	-132	-136	-136	-119	0	- 21	- 43	- 34	- 34	- 85	-119	- 81
26		- 77	- 43	- 34	- 98	-128	- 72	- 43	0	0	-136	-128	-149	-136	- 43	- 47	0	- 21	0	- 21	+ 21	- 77	- 77	- 94	- 62	
27		-128	-149	-132	-222	-106	-115	-132	-106	- 72	- 64	+ 26	- 51	+106	+ 64	- 21	+ 51	+149	+ 85	+ 77	- 77	- 30	-141	- 94	+ 64	- 42
28		+375	+ 94	-311	-256	-324	-136	-170	-213	+ 56	-119	-106	- 94	- 47	+ 77	+ 81	+ 34	- 47	- 21	+ 77	+ 21	- 64	- 85	0	- 60	- 52
29		-136	-115	-136	0	-200	-170	- 98	+ 21	- 43	- 34	0	-371	-243	-170	- 77	+ 94	+128	+106	+ 47	- 43	-106	-106	-141	-175	- 82
30	X	-170	-149	-106	- 77	- 64	- 43	0	+ 85	+ 77	+149	+119	-119	-341	-396	-256	-106	+ 43	+141	+179	+162	0	- 34	- 85	- 89	- 45
MEANS ALL DAYS		- 67	- 82	-160	-129	- 97	- 80	- 58	+ 68	+ 40	- 38	-116	-218	-217	- 58	- 83	- 25	+ 23	+ 41	+ 59	- 12	- 13	- 71	- 65	-119	- 62
MEANS 10 DAYS		-124	- 71	- 91	-109	-111	- 55	- 32	+ 83	+ 70	- 17	- 76	-204	-246	-161	-128	- 99	- 46	+ 19	- 6	- 7	- 30	- 9	- 80	- 83	- 67

* = 10 LEAST DISTURBED DAYS

TABLE 100

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1933

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 52	+115	- 72	-129	+ 29	0	-115	+230	+255	+115	+ 29	- 83	-129	-144	-215	-126	- 98	- 32	+ 95	+ 20	0	- 43	- 43	-230	- 45
2		+ 57	+ 72	0	-459	+115	- 14	- 57	+ 57	+115	+224	+195	- 86	-204	-175	-115	+ 29	- 29	- 23	+ 80	+172	+166	- 14	-230	+ 34	- 4
3		+ 23	- 77	-316	- 43	- 86	- 29	+ 17	- 29	+100	0	+207	+387	-316	0	+ 63	-132	- 60	- 57	- 34	+201	- 66	-109	- 86	- 57	- 21
4		- 23	-232	-115	- 14	- 52	0	-100	+459	- 86	+ 29	+ 86	- 63	+ 83	+224	-215	- 63	-198	- 52	0	+ 9	- 29	+ 60	0	0	- 12
5		-244	- 37	- 89	-201	- 46	+135	- 29	- 37	+172	+ 69	+132	+132	- 95	- 60	-313	-149	-230	+ 14	+149	+244	+138	-129	+103	+201	- 7
6		- 32	-126	-296	-144	-250	- 95	-287	+746	- 29	+273	+545	- 34	+ 57	+ 57	+144	- 49	- 29	+230	+ 14	-115	-316	-181	- 49	- 14	+ 1
7		+218	-250	-129	-121	-210	-138	+135	-152	+347	+330	-201	+192	- 43	+574	-574	-178	+224	+ 86	+287	-215	- 9	-118	+ 43	+158	+ 12
8		+ 57	-100	- 32	- 20	+ 72	-115	-112	-161	-207	+ 29	- 60	+175	+100	+382	+ 52	-201	- 95	-187	-161	+ 34	+172	+115	- 32	-430	- 30
9		- 34	- 34	-255	-166	0	-293	+ 34	- 86	- 75	-135	- 57	- 57	- 43	+316	-230	0	0	0	0	+ 72	+172	+224	0	- 60	- 29
10		- 29	- 86	-135	-144	-172	-330	- 27	-100	+ 43	-138	- 57	0	+ 86	+ 98	- 43	+235	+192	+ 29	+164	+192	+129	+ 86	+ 80	-121	- 2
11		- 14	-230	-129	+ 34	- 29	+ 46	- 60	- 43	- 43	+ 14	+ 52	+115	+ 86	+109	+ 57	- 52	- 40	+ 34	-230	-109	+144	-144	- 40	- 52	- 22
12	X	- 32	- 37	- 80	- 86	- 57	- 66	- 72	+ 49	- 80	+155	+175	+129	-187	-195	-187	- 43	+144	+ 23	-132	-115	- 83	+ 14	- 20	- 86	- 36
13	X	- 43	- 14	- 57	- 89	- 86	- 86	- 43	+115	+ 72	+ 80	+100	-146	-118	-109	-195	-215	+212	-138	- 86	- 66	- 26	0	- 34	+230	- 31
14	X	-207	0	- 14	- 86	-126	-144	- 77	+100	+149	+ 29	+129	-178	-152	- 63	-166	-149	- 29	+ 23	+ 14	+ 57	- 57	- 63	- 72	- 52	- 47
15	X	- 86	- 92	- 77	- 34	- 23	- 14	-129	- 14	0	+ 14	+ 80	-115	- 80	- 92	- 57	-126	-115	- 34	+ 23	+121	+129	+ 52	+115	0	- 24
16		+ 34	+ 20	- 60	-187	- 92	- 92	-287	-181	- 86	- 14	- 29	- 57	- 37	+ 14	+ 52	..	..	..	..	..	..	..	..	..	..
17		..	..	..	- 34	- 52	- 57	- 52	+ 14	+ 29	+ 14	- 43	-138	-144	-129	-100	+ 14	+ 14	+ 43	+ 86	+ 86	- 89	- 29	+250	+301	..
18		-172	-192	-152	-123	-109	-178	-210	+258	+129	+ 86	+144	-172	-178	-172	-100	- 52	- 52	+ 29	+ 83	+ 63	+129	+ 72	+ 80	0	- 33
19		- 60	- 95	-109	+ 14	-232	- 86	- 57	+ 57	+ 52	+ 52	- 14	-144	-149	-178	- 57	+ 23	+330	+ 52	-287	-144	- 89	- 14	- 14	- 48	
20		- 57	- 66	- 86	- 89	- 57	- 52	- 37	- 29	- 29	- 63	- 29	- 63	- 92	-144	+ 86	-195	- 66	+115	+430	-247	- 92	- 72	- 57	- 55	- 44
21		- 29	-103	-138	-115	0	- 23	0	+ 72	+ 72	-115	+ 29	- 49	- 43	+ 29	+ 92	- 63	+ 86	0	0	+144	- 34	+ 52	+ 86	+195	+ 6
22	X	+ 86	- 9	- 86	-172	-144	- 57	- 72	+ 14	+ 29	+ 40	+ 72	+ 83	- 57	-115	-172	- 77	- 37	+ 43	+ 32	+ 29	+ 92	+258	-115	- 80	- 17
23	X	- 57	- 23	-109	-149	-106	-138	- 60	+123	+238	+141	+ 72	- 57	- 43	- 34	-115	-216	-215	- 60	- 29	- 29	- 14	-135	- 26	- 32	- 49
24	X	- 57	- 57	-129	- 77	- 57	- 86	- 23	+ 29	+109	+141	+ 63	- 32	- 86	-149	-175	-175	- 77	+ 43	- 29	- 14	0	- 20	- 29	- 34	- 38
25	X	- 52	- 37	-112	-115	-152	- 89	- 95	+ 32	+144	+ 29	+ 60	+ 57	- 32	0	-103	-144	-158	- 29	- 14	+ 23	+ 52	+ 23	- 29	- 86	- 34
26	X	- 14	- 14	0	- 57	-115	- 83	- 60	- 29	- 23	- 57	+ 29	+ 29	- 29	- 29	- 72	- 83	- 83	- 14	+ 23	+ 57	- 29	- 72	- 23	- 29	- 32
27		- 86	-106	- 83	-175	- 95	-100	-100	-144	-100	- 86	+273	+273	+316	+364	+201	+ 52	+ 29	- 80	- 11	- 69	- 57	-123	- 52	+ 52	+ 4
28		+187	+ 57	-158	-287	- 52	-166	-115	-430	- 66	-115	- 57	+ 23	+ 43	+166	+115	0	- 57	- 26	-121	- 89	-103	+ 14	+ 34	+ 29	- 49
29		-115	- 86	- 80	+ 29	+ 43	+100	+ 86	0	0	+100	+210	- 63	0	- 43	- 57	- 14	+135	+164	+ 86	+ 43	0	- 14	- 83	- 80	+ 15
30	X	- 92	- 83	- 57	- 14	0	- 14	0	+118	+152	+207	+258	+135	- 29	-273	-230	-152	0	+ 83	+100	+ 63	+ 34	+ 29	- 32	- 29	+ 7
MEANS		- 34	- 69	-111	-108	- 71	- 76	- 59	+ 43	+ 51	+ 88	+ 14	- 48	+ 12	- 92	- 86	- 11	+ 8	+ 16	+ 12	+ 13	- 9	- 19	- 23	- 21	
MEANS		- 55	- 37	- 72	- 88	- 87	- 78	- 63	+ 54	+ 79	+ 75	+104	- 10	- 81	-106	-147	-148	- 36	- 6	- 10	+ 13	+ 0	+ 9	- 26	- 20	- 30
O DAYS																										

** = 10 LEAST DISTURBED DAYS

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

* = 10 LEAST DISTURBED DAYS

TABLE 103

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY																									LENGTH IN KMS																									DIRECTION N 19°.5 E																								
LINE OM																									56.8																									19°.5 E																								
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																																																
1		-171	+43	+94	-34	-260	-248	-218	-128	+162	+384	+512	-901	+94	-175	0	-60	0	+98	+192	+56	+278	+525	-436	-384	-24																																																
2		-77	-171	-342	-342	-43	+21	-90	-34	-175	+85	+214	-17	-303	-256	-175	-94	0	+38	0	-34	+81	+21	-85	-85	-78																																																
3		-418	-256	0	-209	-132	-162	-171	-81	+77	+175	+51	-56	-256	-337	-256	-90	+30	+43	+124	-43	-128	-73	-128	-128	-101																																																
4	X	-145	-132	-162	-137	-120	-141	-162	-106	+115	+171	+196	-77	-252	-214	-226	-81	+38	+43	+34	+38	+38	+47	-43	-132	-59																																																
5	X	-137	-128	-106	-90	-102	-81	-115	+56	+222	+427	+384	-13	-299	-512	-418	-209	-149	0	+38	-34	-30	-73	-98	-132	-67																																																
6	X	-132	-94	-85	-81	-90	-128	-77	-13	+222	+508	+427	-167	-436	-342	-376	-209	0	+85	+81	+102	+43	-30	-81	-128	-42																																																
7	X	-90	-162	-128	-149	-124	-94	-102	-51	+299	+551	+333	-320	-316	-363	-508	-149	+162	+85	+115	+90	+205	-94	-98	-167	-45																																																
8	X	-167	-303	-43	-128	-51	-51	-21	+26	+162	+427	+192	+137	-380	-337	-227	-45	-64	-80	+27	-80	-76	-83	-125	-106	-58																																																
9	X	-72	-152	-152	-133	-110	-152	-49	+15	+292	+371	+246	-243	-360	-474	-334	-190	-72	+83	+19	-38	-34	-19	-68	-80	-71																																																
10	X	-144	-68	-38	-186	-152	-110	-95	-76	+227	+352	+227	-341	-417	-428	-155	-68	-8	+197	-117	+19	-76	-30	-38	-155	-70																																																
11	X	-182	-152	-76	-76	-102	-114	-114	-30	+231	+383	+303	-19	-421	-568	-299	-95	-76	-38	-76	-42	-34	-152	-148	-114	-84																																																
12	X	-114	-140	-129	-61	-197	-72	-114	0	+152	+296	+235	-413	-606	-474	-224	+421	+144	+42	0	-45	-80	-53	-87	-133	-69																																																
13	X	-171	-117	-76	-80	-152	-133	-45	0	+258	+190	+38	-114	-284	-307	-334	-212	-64	+38	+38	-72	-102	-76	-114	-64	-81																																																
14		-27	-125	-243	0	-170	-114	-76	-190	+167	+152	+83	-34	-413	-174	-76	-45	-34	+68	+68	0	+8	-117	-148	-38	-62																																																
15		-163	-182	-38	-186	-133	-76	-178	-91	+76	+178	0	+45	-155	-208	-117	-114	-19	-42	-53	+114	-45	-83	+68	-70	-62																																																
16		-171	-114	-447	-379	-45	-76	-38	-129	+30	+299	+117	+265	-269	-303	-265	-53	-72	0	-42	0	0	-45	-72	-95	-79																																																
17		-159	-190	-114	-152	-114	-57	-64	+19	+303	+330	+8	-424	-531	-421	-303	-117	-45	-19	+72	-34	-87	-76	-110	-190	-103																																																
18		-80	-34	-114	-231	-121	-163	0	-15	+110	+231	-42	-447	-307	-227	-307	-38	+76	+178	-27	0	+38	-83	-152	-76	-76																																																
19		-186	-87	-159	-34	-68	-42	-38	+133	+417	+379	+42	-299	-489	-572	-527	-269	-45	0	-53	-72	-38	-8	-42	-64	-88																																																
20		-110	+34	-262	-159	-352	-299	-11	0	+117	+262	+68	-371	-390	-337	-318	-182	-11	0	0	+38	+38	-95	-114	-57	-105																																																
21		-76	-455	+38	+34	0	-11	+38	-117	+155	+330	+148	-42	-201	-341	-273	-231	-76	-42	-19	-76	-76	-19	-68	-80	-61																																																
22		-148	-117	-171	-152	-148	-193	-190	+34	+133	+284	+42	-193	-379	-455	-421	-42	+318	+64	-34	-19	+262	-38	-76	-190	-76																																																
23		-83	-303	-220	-57	-19	0	0	+72	+284	+341	+182	-224	-402	-557	+481	-80	-19	-102	-34	+152	-190	-76	-117	-38	-42																																																
24		-114	-178	-80	-76	-114	-121	-114	-49	+80	+337	+76	-76	-190	-171	-190	+19	-190	-114	0	+30	-76	-72	-80	+34	-60																																																
25		-246	-152	+34	-133	-121	-114	-57	-102	+30	+265	+417	-95	-326	-330	-451	-125	+38	+42	-42	-45	-34	+182	-190	-262	-76																																																
26		-224	-152	-341	-428	-155	-201	-197	-190	-38	+258	+167	-208	-341	-231	-190	-102	-38	+76	-68	+152	-186	-38	-68	-114	-119																																																
27		-197	-167	-152	-152	-114	-133	-152	-80	-19	+190	+387	+117	-246	-417	-398	-190	+76	0	+34	+19	0	-19	-38	-110	-73																																																
28		-114	-110	-80	-49	-383	-38	-171	-133	+19	+133	+265	-152	-349	-152	-235	-95	+155	+110	-144	-19	+117	+72	+337	-190	-50																																																
29		-334	-45	-296	+34	-155	-148	-152	-80	+190	+307	+193	-273	-485	-387	-140	-178	+68	+106	-8	-80	+34	+121	-148	-114	-82																																																
30		-178	-155	-114	-23	+11	-38	-64	-8	-19	+80	+23	-167	-262	-125	-155	-38	+114	-38	+34	+15	-11	+8	-27	-114	-52																																																
31		-34	-190	-80	-76	-114	-155	-83	+133	+155	+224	+114	-227	-337	-417	-337	-190	+42	+155	+72	+83	+72	-76	-95	-114	-61																																																
MEANS		-150	-147	-122	-127	-127	-111	-94	-39	+143	+287	+182	-173	-333	-342	-250	-102	+9	+35	+7	+6	-3	-18	-87	-119	-70																																																
ALL DAYS																																																																										
MEANS		-135	-145	-100	-112	-120	-108	-89	-18	+218	+368	+258	-157	-377	-402	-310	-84	-9	+46	+16	-6	-15	-56	-90	-121	-65																																																
10 DAYS																																																																										

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										DIRECTION										E 0°.5 N
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1		..	..	..	..	..	..	0	+231	+379	+436	+838	+95	-144	-318	-26	-72	+92	+217	+127	+277	+191	-58	-101	..			
2		+55	+32	-257	-249	-139	+29	-61	+173	-283	+130	+434	+289	-52	-144	-150	-171	0	+32	+43	+26	+176	+116	-12	+72	+4								
3		-260	-147	+75	-84	-64	-58	-118	-40	+142	+237	+260	+208	-58	-171	-202	-147	-75	-9	-144	0	-29	0	-9	+23	-28								
4	X	-9	-32	-64	-81	-58	-113	-92	-55	0	+87	+107	+243	-64	-179	-231	-139	-58	+6	+32	+55	+101	+116	+43	-66	-19								
5	X	-61	-58	-49	-43	-55	-58	-113	-38	+72	+341	+587	+419	-23	-347	-445	-332	-318	-64	-43	0	+6	-14	-38	-35	-30								
6	X	-52	-14	-29	-38	-84	-101	-61	-49	+66	+344	+584	+214	-142	-202	-405	-381	-144	+29	+43	+95	+101	0	-6	-78	-13								
7	X	-40	-95	-87	-90	-72	-55	-90	-58	+144	+434	+549	+139	-52	-214	-488	-289	-23	+29	+90	+87	+32	-20	+29	-58	-8								
8	X	-58	-173	-90	-121	-61	-14	-38	-58	+29	+289	+457	+217	-95	-217	-144	-90	-79	-60	+14	-76	-30	-14	-19	+8	-18								
9	X	+24	-79	-84	-79	-84	-114	-54	+22	+190	+277	+460	+133	-84	-326	-245	-305	-242	-24	+11	0	+60	+11	+24	-63	-29								
10	X	-82	-19	-24	-82	-131	-63	-82	-95	+122	+264	+381	+27	-82	-299	-109	-114	-106	+215	-144	+14	-84	0	+52	-95	-22								
11	X	-84	-92	-41	-54	-52	-109	-82	-14	+139	+299	+403	+324	-52	-163	-299	-199	-190	-27	-30	0	+24	-84	-33	-5	-18								
12	X	-5	-87	-30	+38	-122	-27	-82	-8	+90	+190	+375	+24	-277	-408	-272	-30	+82	+79	+24	-22	-24	+19	-24	-79	-24								
13	X	-95	-82	-33	-14	-112	-136	-27	-30	+177	+204	+177	+190	0	-112	-286	-305	-174	-11	+8	-41	-54	-33	-38	+54	-32								
14		+90	-30	-218	+52	-136	-60	-82	-136	+245	+188	+277	+307	+63	-193	+73	-44	-133	-24	0	-14	+19	-49	-136	+24	+3								
15		-82	-141	-41	-65	-106	-27	-109	-120	+24	+82	+133	+427	+242	-152	-112	-136	-24	-41	-112	+27	+14	-82	+54	0	-14								
16		-60	-82	-228	-296	-57	0	-63	-163	+52	+356	+335	+95	-63	-220	-272	-33	-182	-30	-27	+33	+54	+14	0	-27	-36								
17		-106	-106	-82	-79	-57	-14	-30	0	+171	+324	+299	-35	-174	-299	-326	-267	-160	-68	0	+19	-109	-30	-19	-71	-51								
18		+38	+57	-24	-171	-160	+218	-22	-63	+68	+201	+267	-106	+49	0	-326	-128	-41	+87	+30	+68	+114	-76	-60	+27	-1								
19		-27	-33	-120	-27	-52	-49	-79	+41	+299	+462	+364	+109	-242	-438	-215	-326	-155	+14	-82	-57	+8	+52	+5	+35	-22								
20		-24	+133	-160	-109	-136	-299	-54	-95	+49	+264	+310	-57	-92	-209	-332	-188	-90	0	-14	+95	+44	+22	-24	0	-40								
21		+52	-283	+46	+8	+41	0	+54	+136	+49	+272	+220	+258	+109	-163	-237	-261	-196	-106	-44	-63	-57	+33	+19	-14	-5								
22		-54	-57	-92	-84	-79	-139	-139	-95	-27	+71	+117	+204	+82	-248	-242	-27	+272	+54	-114	-35	+307	-22	-41	-52	-18								
23		+24	-299	-190	-41	0	0	-8	+14	+120	+345	+394	+215	0	-408	-354	-367	-79	-87	-27	+136	-166	-30	-60	0	-36								
24		-11	-131	-27	-54	-84	-133	-139	-109	0	+272	+299	+112	+27	-82	-163	+24	-299	-218	-27	+95	-82	-41	-54	+79	-31								
25		-193	-112	+35	-82	-90	-79	-46	+52	+27	+188	+520	+185	0	-139	-299	-253	-193	-109	-95	-60	-19	-193	-27	-73	-44								
26		-27	+27	-112	-163	+27	0	+33	-22	+54	+190	+370	+27	-114	+60	-68	-152	-57	+38	-24	+79	-52	+90	+33	0	+10								
27		-122	-106	-82	-82	-92	-82	-122	-152	-109	+106	+441	+424	+92	-218	-313	-280	-27	-82	+27	+14	+27	+49	+27	-57	-30								
28		-44	-52	-68	-27	-375	-57	-24	-204	-136	-30	+405	+163	+27	+14	-125	-188	+79	-76	-218	+27	+190	+193	+136	+27	-15								
29		-196	+54	-218	-60	-57	-19	-114	-54	+109	+190	+248	+87	-150	-174	-54	-267	-33	+242	-22	-14	+82	-299	-27	+14	-30								
30		-52	-52	-27	0	-27	+54	-109	-144	-109	+68	+79	-5	-33	+79	-30	-22	+92	-84	+35	+8	+52	+54	+41	-27	-8								
31		+73	-177	-14	-63	-76	-109	-60	+98	+106	+218	+326	+136	+49	-318	-272	-239	-133	+117	+114	+106	+54	-54	-24	-46	-8								
MEANS		-47	-75	-78	-75	-85	-54	-67	-42	+63	+229	+339	+166	-37	-196	-231	-189	-90	-6	-25	+20	+21	-9	-6	-16	-20								
MEANS		-46	-73	-53	-56	-83	-79	-72	-38	+103	+273	+408	+193	-87	-247	-292	-218	-125	+17	0	+11	+11	-2	-1	-42	-21								
10 DAYS																																		

TABLE 105

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 19° 5 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1	X	-114	-72	-118	-114	-114	-76	-87	0	+68	+122	-84	-182	-236	-304	-163	-46	+95	+68	-76	+11	-30	-53	-114	-163	-73			
2	X	-163	-129	-141	-122	-76	0	-68	+118	+110	+144	-182	-532	-122	-186	-255	+49	+46	+103	+38	+76	-76	-34	-65	-57				
3		-296	-110	-42	-76	-186	-136	0	+133	+122	+160	+11	-209	-300	-228	-141	-114	-57	-80	+148	+46	+144	-209	-68	-118	-66			
4		-53	-186	-99	-81	-30	-38	-255	-95	+163	+418	+190	-122	-209	-391	-285	+46	-144	-11	-30	+110	+19	+110	+53	-125	-44			
5	X	-160	-87	-160	-152	-46	-84	-133	-133	-27	+201	+262	+137	-167	-201	-148	-342	+38	+194	+30	0	-49	-65	-87	-91	-53			
6	X	-110	-91	-110	-122	-152	-125	-84	-152	+148	+228	+296	-137	-458	-380	-255	-285	+422	+163	-34	-46	-38	-72	-141	-68	-67			
7	X	-103	-156	-163	-144	-42	-152	-133	-53	+27	+110	+110	+46	-136	-38	0	-228	-144	-80	-46	-49	-46	-72	-42	-68	-66			
8		-84	-65	-87	-114	-125	-84	-118	-156	-63	+99	0	-27	-87	-274	-106	-456	+125	+707	+680	+304	+198	+315	+87	-190	+20			
9		-91	-148	-304	-380	-125	-327	-460	-114	-612	-190	-570	+148	+144	+76	+42	+68	-84	-106	-34	-19	-68	-160	-76	-84	-134			
10		-163	-103	-114	+285	-277	-130	-125	-524	-350	+87	+418	+232	-205	-308	-190	-114	+11	+46	-103	-38	+543	-285	-125	-114	-71			
11		-322	-152	-38	-152	-118	-125	-110	-57	-76	+118	+148	+49	-353	-380	-156	-114	-27	-11	-19	-49	-76	+19	+175	-76	-76			
12		-114	-144	-125	-72	-80	-95	-84	-95	-72	-91	-68	-285	-380	-224	+122	+418	+38	-38	-72	0	-8	-65	+38	-49	-64			
13	X	-228	-133	-34	-68	-76	-103	-68	0	-152	-315	-171	-38	-38	-190	-148	0	-80	+57	+19	+72	0	-38	-152	-133	-84			
14	X	-274	-141	-65	-42	-72	-38	0	+152	+106	-274	-353	-338	-274	-217	-122	-39	+148	+87	+106	-19	-11	-38	-194	-148	-86			
15		-125	-84	-76	-76	-148	0	-72	+118	+475	-34	-399	-232	-190	-201	-110	-163	+53	+133	+152	+125	+68	-27	-228	-152	-50			
16		-46	-277	-122	-152	-68	-224	+190	+266	+684	+270	+342	+114	-353	-38	-46	-19	-38	0	-65	+15	-46	0	+122	+236	+31			
17		+395	-258	-308	-190	-38	-76	0	-133	+91	-57	-42	-179	-144	-27	-141	-266	-277	-110	-11	-23	+38	-80	+68	-30	-75			
18		-125	-266	+228	-490	-68	-114	-224	-38	+76	+194	+338	-277	-152	-300	-65	-87	-84	-68	-34	-19	0	+194	-118	-152	-69			
19		-122	-76	-53	-171	-68	-68	-118	-118	+57	+53	+84	+72	-205	-194	-213	-160	-118	-49	-8	-76	0	-38	-80	+133	-50			
20		-80	-255	-445	-194	-15	-144	-8	+34	-84	0	+76	+57	-38	-220	-232	-228	-167	-72	-38	-53	-84	-76	-38	-148	-102			
21		-163	0	-160	-163	-38	-61	-95	-49	+148	+53	+114	0	-133	-186	-220	-27	0	+38	+27	+589	-114	-262	-91	-53	-37			
22		-65	-224	-232	-87	+38	-34	-42	-232	-34	+11	+38	-53	-72	-80	-114	-34	0	-190	-80	-87	-76	-84	-76	-76	-75			
23	X	-99	-114	-114	-114	-133	-76	-103	-148	-182	-114	-49	-72	-19	-87	-103	-80	-110	-144	-19	0	-49	-72	-80	-46	-89			
24		-84	-99	-110	-72	-68	0	-266	-118	-57	-129	-42	-118	-160	-152	+186	+262	+38	-171	-76	-11	-30	8	0	-42	-55			
25		-34	-49	-11	-152	-38	-125	+167	+213	+141	+133	-38	-247	-304	-236	-84	-129	+68	+38	-19	-8	-125	-118	-65	-87	-46			
26	X	-95	-34	-95	-152	-76	-133	-38	+61	+46	+65	-49	-262	-312	-323	-156	+38	+68	+34	+19	-30	-42	-76	-118	-95	-74			
27	X	-125	-122	-76	-38	-266	-80	+148	+42	+198	+72	0	-300	-304	-148	-49	-65	-152	+30	-38	-27	-46	-76	-114	-65	-67			
28		-99	-243	-38	-57	-110	-266	+68	+171	+190	+122	-118	-327	-361	-391	-156	+38	+133	+38	+34	+19	-34	0	-110	-72	-65			
MEANS ALL DAYS		-109	-136	-115	-124	-95	-105	-76	-26	+40	+52	+21	-97	-212	-207	-114	-84	-5	+21	+19	+30	+5	-51	-50	-76	-62			
MEANS 10 DAYS		-147	-108	-108	-107	-105	-87	-57	-11	+34	+20	+11	-130	-245	-201	-133	-130	+33	+46	+6	-5	-24	-64	-108	-94	-71			

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY		COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN
		LINE		OW		93.9						DIRECTION		E 0°.5 N																		
	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	-35	-27	-82	-68	-60	-46	-93	-93	0	+63	+33	+22	0	-177	-106	-90	-5	0	-150	+19	+11	+22	-63	-87	-42						
2	X	-106	-76	-101	-115	-93	+14	-90	+98	+147	+82	+308	0	-287	+188	-218	-486	-66	0	+101	+55	+85	+27	+38	+46	-19						
3		-300	0	-27	-33	-147	-82	0	+27	+52	+117	+177	+30	-54	-82	-117	-207	-142	-147	+164	+117	+96	-175	-33	-82	-35						
4		+19	-136	-66	-90	-38	-19	-243	-207	+87	+399	+273	+96	+90	-335	-319	+96	-235	-98	-92	+66	-27	+134	+136	-93	-27						
5	X	-85	-55	-79	-112	-66	-66	-126	-240	-167	+188	+101	+497	+33	-55	-158	-254	-287	+52	-41	-27	-60	-49	-49	-55	-46						
6	X	-55	-44	-57	-82	-120	-95	-55	-109	-25	+82	+399	+136	-130	-227	-169	-232	-14	+106	-93	-82	-19	-27	-101	0	-44						
7	X	-52	-55	-82	-90	-33	-128	-109	-55	+27	+52	-112	+191	+74	+55	+120	-96	-106	-79	-74	-60	-8	-57	-22	-27	-30						
8		-49	-16	-38	-74	-109	-55	-126	-164	-158	-46	+27	+167	+106	-164	-92	-410	+199	+1037	+811	+420	+104	+410	-106	-205	+61						
9		-175	-198	-352	-328	-33	-221	-338	+55	-524	-66	-519	+295	+161	+188	+194	+158	-33	-63	-55	+8	-35	-169	-27	-49	-90						
10		-85	-82	-161	+295	-186	-40	-150	-85	-221	-82	+224	+396	-227	-243	-82	-16	+25	+79	-55	0	+322	-14	-106	-68	-24						
11		-167	-139	-30	-74	-57	-136	-82	-97	-161	-19	+93	+197	-191	-145	-30	+27	-142	-60	-30	0	-19	+14	-96	+30	-54						
12		-82	-79	-109	-52	-55	-57	-55	-63	-22	-44	-79	-112	-232	-74	+306	+445	+106	+71	-197	+22	-8	-35	+79	-46	-16						
13	X	-167	-131	-49	-82	-57	-82	-68	-16	-82	-169	-35	+85	+115	-41	-49	+175	-136	0	0	+57	+33	+46	-85	-63	-33						
14	X	-191	-85	-38	-52	-76	-54	+74	+87	+49	-213	-257	-197	-164	-238	-207	-74	+164	+218	+123	-14	+8	-19	-262	+27	-58						
15		-57	-57	-55	-60	-128	-33	-104	+164	+410	+90	-232	+27	+30	-44	-213	-248	+27	+134	+153	+167	+109	-76	-169	-57	-9						
16		-35	-216	-164	-254	-194	-268	+278	+183	+576	+265	+341	+546	-30	-27	-85	-167	-57	-38	-74	+131	-147	+191	+54	+442	+52						
17		+410	-164	-115	-139	-169	-106	+95	-82	+33	-138	-27	-41	-82	-300	+158	-268	-355	-246	+22	-101	+136	-79	-25	+38	-67						
18		-79	-248	+218	-404	-93	+52	-136	-207	0	+76	+497	-85	-52	-82	+167	-161	-109	-218	-123	-71	+27	+27	+52	-85	-43						
19		-82	-25	-35	-96	-33	-63	-82	-55	-60	-101	-106	-27	+46	-63	-79	-126	-85	-63	-74	-87	0	-246	+369	+167	-42						
20		-5	-164	-303	-164	+14	-35	-27	-52	-186	-101	+109	+169	+201	-11	-164	-145	-142	-68	-82	-79	-63	-57	-14	-90	-60						
21		-142	+79	-96	-167	+8	-96	-183	-112	+14	-27	+131	+131	+49	-57	-41	+82	+55	+35	+60	+287	-191	-262	-79	-27	-23						
22		-37	-218	-112	-8	+57	-27	-8	-167	-101	-63	+35	-14	+30	+27	-38	0	+57	-55	-27	-112	-27	-60	-30	-44	-42						
23	X	-44	-109	-87	-106	-32	-46	-96	-145	-136	-115	-128	+128	+117	+49	-22	+14	-55	-134	-22	+35	+25	0	-5	+27	-39						
24		-30	-68	-85	-55	-79	-8	-112	-25	-98	-79	+57	+106	+55	-68	+229	+273	+49	-199	-96	+117	+5	+109	+57	0	+2						
25		+22	-25	0	0	-131	-30	-104	+123	+112	+153	-33	-109	-123	-136	-27	+235	+32	+66	-25	-49	-145	-57	-27	-117	-16						
26	X	-41	+60	-104	-57	-68	-46	-30	+35	+46	+68	-35	-57	-32	-161	-104	0	-8	-22	+5	-11	0	-25	-33	-55	-30						
27	X	-106	-57	-55	-14	-126	-33	+55	+27	0	+112	+191	+38	0	-76	-55	-33	+109	+52	-27	-52	-63	-44	-63	-46	-11						
28		-55	-153	-46	-55	-106	-191	0	+87	+120	+153	-33	-49	-60	-251	-175	-52	+55	+14	0	+27	+22	+38	-68	-14	-33						
29		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		-66	-88	-82	-91	-81	-72	-72	-38	-10	+21	+50	+92	-21	-93	-49	-56	-39	+13	+4	+28	+6	-15	-24	-19	-29						
MEANS 10 DAYS		-83	-58	-73	-78	-78	-59	-54	-41	-14	+15	+46	+84	-31	-68	-97	-108	-40	+19	-18	-8	+1	-13	-64	-23	-35						

* = 10 LEAST DISTURBED DAYS

TABLE 107

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LINE		OM		LENGTH IN KMS										56.8										DIRECTION										N 19° 5' E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																											
1	X	- 95	- 99	-114	- 19	+ 19	+ 38	+121	+254	+133	+ 61	- 99	-280	-417	-504	-280	+ 19	0	+ 72	+ 68	+224	+201	+ 57	- 49	-235	- 38																											
2		-303	- 64	+ 49	+ 11	-527	-303	+671	+ 57	- 83	-102	-315	-303	-254	+133	+ 83	+250	+182	+322	-190	- 19	0	0	- 68	-114	- 37																											
3	X	- 87	-216	-243	- 30	- 19	- 8	+ 76	+ 95	+ 68	- 64	-239	-341	-512	-345	- 23	+136	-106	+ 30	0	0	- 27	- 42	- 72	-121	- 87																											
4		-133	-121	-114	-102	- 49	- 19	+ 23	+110	+152	- 99	+190	-307	-587	-186	+ 49	-250	- 38	+428	+284	+368	+436	+163	- 53	+ 15	+ 6																											
5		-644	+417	+125	- 34	- 45	-129	+ 19	+197	+ 95	+114	-220	-458	-322	-239	+436	+152	+ 87	- 57	+ 99	-110	-303	+155	-133	-182	- 41																											
6		-671	+ 53	-106	-136	+136	- 19	+ 42	+117	+ 49	- 91	-315	-273	-265	-159	-129	- 76	0	+ 45	+114	+390	+500	-478	- 19	+ 99	- 50																											
7		- 15	- 87	-1012	+288	+133	-197	+ 76	+227	-129	- 38	-277	-334	-136	- 23	-114	+773	-197	- 61	0	+178	-155	+ 80	-129	-379	- 64																											
8		- 57	-197	- 49	- 49	- 76	-110	- 49	+ 53	+ 57	0	- 61	-121	-186	- 80	+110	- 38	-163	-106	+ 15	- 95	- 76	+ 68	+144	0	- 44																											
9		-496	- 27	+ 49	- 27	- 49	-117	- 8	+182	+ 42	-269	-182	-178	-379	- 83	+269	+ 68	- 34	+ 45	+ 42	+ 45	- 19	+171	-190	-224	- 57																											
10		-190	-641	+254	+125	+ 15	-133	+110	+ 61	+ 34	-144	-208	-152	- 99	-296	-192	- 80	+205	+ 11	- 34	+186	+152	- 68	-303	-186	- 66																											
11		-284	- 57	- 45	+ 64	+ 27	- 30	+152	+106	- 38	-254	-303	-356	- 42	-182	0	+ 57	-114	+106	+ 30	- 8	- 57	- 83	- 91	-296	- 71																											
12	X	- 42	+ 19	+ 11	-140	- 42	+ 11	+ 45	+152	+106	- 11	-243	-432	-311	-292	-224	+ 11	- 42	+ 11	- 8	- 49	- 38	- 61	- 64	-125	- 73																											
13	X	-114	-102	- 64	- 76	- 38	0	+ 61	+125	+102	-337	-398	-341	-258	-144	- 27	+ 38	+ 95	- 27	- 53	0	- 38	- 80	-114	- 80	- 78																											
14	X	-106	- 91	-102	- 53	- 38	- 8	+ 87	+235	+216	0	-269	-390	-394	-121	-152	-121	- 11	+243	+243	+152	+171	+ 57	+224	-201	- 18																											
15		-178	-190	-205	- 34	- 42	-455	+254	+273	+171	- 49	-337	-474	-455	-394	-246	+ 15	+ 38	+ 11	- 23	- 42	- 64	- 87	- 19	- 87	-109																											
16		- 64	- 87	+ 91	+102	+ 78	- 49	+ 38	-117	-197	-174	-284	-258	-462	-239	- 19	-129	+167	+334	+ 38	- 91	- 95	- 34	-155	-114	- 72																											
17		- 57	- 57	-250	-417	+ 61	+ 72	+ 95	+ 78	+ 38	- 30	-318	-288	-398	-152	-144	+ 57	+341	+155	- 49	- 61	- 64	- 34	- 49	- 95	- 65																											
18		-474	+ 76	- 42	-299	- 8	+ 76	0	+148	+231	+265	-303	-345	-341	-231	-246	+193	- 95	+ 53	+186	- 11	- 38	- 64	- 99	- 99	- 61																											
19	X	+ 38	-212	-171	+102	-212	- 19	+ 38	+ 53	+ 83	- 61	-144	-231	-326	-311	-262	- 49	+ 57	+ 99	0	+ 61	- 11	+ 38	- 11	-121	- 66																											
20	X	-102	-152	-250	- 61	- 8	- 27	- 83	+ 42	+ 30	+ 45	-114	-114	-140	-186	-224	-341	- 72	- 45	- 34	- 76	- 64	- 83	- 11	- 38	- 88																											
21	X	-125	-178	- 95	- 53	+ 8	- 76	0	0	+ 27	-186	-201	-307	-182	-133	-167	- 30	+ 34	-125	0	+ 27	+190	+474	+167	-337	- 53																											
22		-269	-152	- 57	- 49	- 57	- 19	-330	-121	- 11	-208	-284	+ 76	- 95	+205	- 80	+341	- 80	+ 19	0	+ 72	+121	+ 15	- 19	-144	- 47																											
23		- 95	-182	- 99	-152	-133	- 45	+ 49	- 80	-227	-280	-117	-102	- 72	- 68	- 76	- 61	-284	- 11	+ 38	+ 30	+ 34	+ 49	+129	-417	- 90																											
24		+163	+212	- 64	-121	- 15	0	+ 53	+ 95	+114	- 19	-152	-220	-303	- 72	-136	-417	+606	+565	+572	-110	-455	-133	-167	-155	- 7																											
25		- 68	-178	-197	-254	+ 64	+167	- 61	+246	+ 38	+114	- 87	-201	-121	-231	+ 91	-262	- 64	+133	- 87	- 99	- 76	- 49	-110	- 83	- 57																											
26	X	-121	-174	- 95	- 83	- 27	- 38	+ 64	+ 38	+125	+ 38	- 83	-125	- 72	-360	-322	+ 19	+ 64	+ 30	- 11	- 38	- 42	- 8	- 68	- 64	- 56																											
27	X	-125	- 91	- 76	- 64	- 80	- 38	0	+ 38	+ 38	- 49	-114	-231	-227	-182	-106	-186	-106	- 11	+ 34	- 45	- 38	- 53	- 34	- 76	- 76																											
28		+ 76	+ 23	+ 42	-110	-349	- 15	+136	+171	+ 80	- 8	-193	-288	-337	+ 61	+ 64	-136	+603	+ 95	-114	- 11	+ 72	-197	-315	-341	- 41																											
29		-178	+114	-171	-292	-102	+ 76	+ 38	+224	+190	- 80	-390	-277	-197	-114	- 57	- 34	+167	+ 57	+ 68	- 72	- 8	+ 42	-205	- 64	- 53																											
30		-216	-163	+ 8	+ 30	- 27	- 38	- 30	+ 87	+231	+ 95	-163	-500	-341	-352	- 61	-212	+417	+205	- 80	- 27	- 68	+178	- 61	- 53	- 48																											
31		-167	-178	+432	-152	+ 80	-803	-284	+436	+447	+ 42	-398	-152	-262	-307	-110	-102	-114	+ 38	0	+121	+ 27	-243	-125	0	- 74																											
MEANS ALL DAYS		-168	- 90	- 83	- 67	- 43	- 73	+ 45	+116	+ 71	- 57	-214	-268	-274	-180	- 74	- 13	+ 50	+ 86	+ 37	+ 29	+ 5	- 8	- 67	-139	- 57																											
MEANS 10 DAYS		- 88	-130	-120	- 48	- 44	- 16	+ 41	+103	+ 93	- 56	-190	-279	-284	-258	-179	- 51	- 9	+ 28	+ 24	+ 26	+ 30	+ 30	- 3	-140	- 63																											

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE		OW		LENGTH IN KMS										93.9 DIRECTION				E 0°.5 N			
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN							
1	X	- 57	- 82	-122	- 63	- 33	- 27	+ 54	+112	+163	+ 30	+ 14	-131	-354	-343	- 54	-122	- 22	+ 54	+310	+209	+152	+ 14	-239	- 21								
2		-245	- 33	- 22	+ 19	-215	-503	+430	- 38	- 19	+ 49	-106	- 68	- 71	+517	+272	+351	+131	+160	-288	- 95	- 27	+ 22	- 24	- 92	+ 4							
3	X	- 63	-182	-109	+ 22	- 11	- 11	+174	- 38	- 33	- 24	- 33	- 95	-239	-212	- 35	+ 76	+ 76	+ 35	+ 8	+ 5	- 5	- 16	- 5	- 63	- 32							
4		- 79	- 73	- 71	- 73	- 27	- 35	- 33	- 68	+310	+ 98	+261	+150	- 24	+386	+354	-490	-147	+248	+264	+207	+163	- 27	- 57	+147	+ 58							
5		-952	+653	-136	+147	- 46	- 73	- 8	+180	+ 92	- 79	- 35	-283	-215	- 60	+348	+264	+ 98	-160	-234	-109	-218	+188	-136	- 68	- 35							
6		-427	- 19	- 14	- 73	- 35	- 35	+ 95	- 68	- 73	- 68	-180	- 57	-114	- 35	- 71	- 98	- 82	+ 27	+171	+174	+343	-305	+ 35	- 16	- 39							
7		- 68	+ 46	-596	+ 16	+174	-166	- 35	+318	-218	-231	-253	-166	+171	+150	+ 46	+745	-163	- 87	+ 90	+141	-228	+ 35	- 27	-267	- 24							
8		- 30	-125	0	- 54	- 44	-117	- 76	-106	- 24	- 46	- 49	- 38	- 30	+ 76	+218	- 82	-245	-103	- 65	- 60	+109	+ 35	+ 30	- 37								
9		-386	- 22	- 19	0	-109	-155	-125	+133	+ 52	-190	- 46	+ 63	-231	+ 33	+354	- 41	- 65	+155	+ 16	+120	+155	+152	-264	-103	- 22							
10		-122	-582	+188	+190	+ 57	-131	+ 27	+ 30	+ 24	- 46	- 33	+ 73	+223	-299	-212	-131	+147	- 24	- 46	+150	-411	+193	+ 54	-109	- 33							
11		-180	- 30	- 33	+ 24	+ 19	- 46	+ 82	+120	+ 8	-122	-215	-239	+307	- 14	+141	+ 41	-174	+133	+ 33	-193	+ 5	0	- 35	-160	- 22							
12	X	- 60	+ 19	+ 35	- 76	-106	+ 22	- 5	+ 98	+122	+ 57	- 14	-152	- 68	-141	-136	- 79	-180	- 49	+ 33	- 30	- 19	- 27	- 5	- 95	- 36							
13	X	- 68	- 84	- 65	- 84	- 98	- 16	+ 8	+ 19	+ 52	-218	-166	- 54	- 95	- 57	- 73	- 27	+ 33	- 35	- 46	+ 27	0	- 33	- 49	- 38	- 49							
14	X	- 73	-106	-128	- 82	- 57	- 57	+ 46	+131	+152	+ 30	- 73	- 63	- 76	+ 44	-136	-253	- 76	+248	+345	+231	+286	- 22	+296	-183	+ 17							
15		-169	-174	-188	- 57	-152	-332	+ 14	+ 57	+ 8	- 19	- 82	- 60	-190	-280	-256	- 65	- 33	- 8	0	- 24	- 27	- 84	+ 68	- 30	- 87							
16		-182	- 54	+155	+ 73	+ 14	- 52	+ 5	- 30	- 98	-133	- 71	+ 82	- 54	- 95	+ 27	- 27	+248	+299	- 27	- 87	-122	- 27	-160	- 33	- 15							
17		- 19	- 63	-248	-343	+ 19	- 24	+ 44	- 41	- 16	+ 11	-136	- 33	- 76	- 30	- 82	+ 79	+280	+ 71	+ 16	-144	- 11	- 52	+ 5	- 46	- 35							
18		-411	+ 46	- 35	-223	- 22	+ 52	- 54	- 38	+199	+294	-160	-117	- 33	+ 11	-166	+163	-169	+ 30	- 27	0	+ 16	- 14	- 30	- 41	- 30							
19	X	+114	-120	-155	+152	-109	+ 19	+ 19	-112	+109	+ 33	+ 90	+ 41	- 16	-131	-215	- 46	+ 44	+ 95	- 33	+122	+ 46	+ 63	+ 30	- 82	- 2							
20	X	-114	-117	-204	- 57	- 30	- 41	- 79	- 41	-101	- 57	+ 8	+112	+ 87	+ 24	-133	-294	- 24	- 44	- 65	-101	- 44	- 79	- 8	- 79	- 62							
21	X	- 52	-166	- 84	- 35	+ 24	- 79	- 49	+ 16	- 82	-196	-166	-122	+ 35	+ 73	- 8	+ 54	+ 41	-136	+ 16	+ 49	+272	+422	-231	- 6								
22		-204	-109	- 19	0	- 44	+ 8	-316	- 57	- 52	-305	-253	+356	+201	+490	+196	+394	+ 35	+ 38	- 82	- 71	+ 71	- 14	- 87	- 95	+ 3							
23		-106	-144	- 87	-131	-106	- 54	- 35	- 54	-326	-340	- 65	+166	+196	+136	+196	-231	-392	0	+ 16	+ 41	+ 98	+ 30	+136	-408	- 61							
24		0	+141	- 38	- 79	- 27	- 24	- 35	+ 68	+ 76	- 57	-117	- 82	+ 14	+131	- 98	-416	+549	+422	+713	- 52	-144	-237	-122	-193	+ 16							
25		- 57	- 90	- 95	-345	+ 92	+103	-141	+139	+117	+128	+ 63	+ 82	+296	- 27	-190	-438	-226	- 35	- 98	- 57	- 90	- 33	- 98	- 87	- 45							
26	X	-114	-193	- 63	- 63	- 35	- 24	+ 30	- 33	+ 79	- 30	- 68	+ 27	+253	-348	-321	+ 30	+ 65	+ 30	+ 22	+ 8	- 27	- 22	- 52	-103	- 40							
27	X	-139	- 82	- 54	- 35	- 57	- 35	- 38	- 49	0	-139	-171	+ 71	+ 54	- 41	- 52	-277	-163	-112	+ 11	- 44	- 14	- 24	- 5	- 49	- 60							
28		+ 71	- 22	- 22	- 44	-272	- 22	+ 44	- 79	+ 27	- 30	-106	+ 33	+ 84	-530	+378	-182	+517	+228	-106	-182	-125	-218	+430	-386	- 21							
29		-109	0	-125	-163	-163	+ 73	- 54	+ 19	+ 87	-109	-305	- 35	+ 63	+ 73	- 41	- 27	+ 68	+ 16	- 27	- 57	+ 5	- 57	-114	+ 16	- 40							
30		-185	-190	- 33	- 5	- 27	- 14	- 49	+ 35	+125	+ 54	- 57	-185	- 76	-101	+112	-152	+294	+326	-220	-158	-163	+180	-299	- 14	- 34							
31		-628	- 98	+362	-190	+ 65	-218	+ 82	+261	+324	+ 38	-313	+362	- 49	-250	+ 38	-188	-163	- 95	- 54	+ 38	+ 27	-272	-326	+272	- 41							
MEANS ALL DAYS		-165	- 66	- 65	- 53	- 44	- 65	0	+ 27	+ 33	- 48	- 91	- 7	+ 6	- 28	+ 4	- 45	+ 7	+ 53	+ 13	+ 5	- 1	- 1	- 17	- 92	- 27							
MEANS 10 DAYS		- 63	-111	- 95	- 32	- 51	- 25	+ 13	+ 4	+ 41	- 36	- 56	- 22	- 20	-114	-145	- 87	- 31	+ 10	+ 34	+ 58	+ 70	+ 41	+ 49	-117	- 29							

* = 10 LEAST DISTURBED DAYS

TABLE 109

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										DIRECTION N 19°.5 E																
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-106	-99	-334	-163	-190	+504	+262	+402	+451	+178	-299	-424	-413	-292	-163	-49	+129	+546	-243	-42	-197	-68	+34	-349	-39
2		-307	+15	-15	+15	+152	0	+178	+239	+155	+34	-205	-326	-470	-447	-216	-38	+80	+76	+99	-11	+64	-30	-102	-152	-50
3		-144	-27	-174	0	-30	+83	+68	+152	+45	+8	-212	-239	-197	-337	-231	0	-23	+212	+106	-91	-72	-102	-57	-171	-60
4		-57	-68	-341	-83	+34	-152	+30	+269	+208	-133	-303	-159	-523	-371	+57	-87	+95	+114	+23	0	-45	0	+322	-114	-54
5		+27	-110	-352	-227	-8	-68	+356	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	-45	+117	+178	+80	+114	-19	+42	+193	+80	+87	+171	+246	-72	-27	+80	+117	+163	..
7		-34	+387	-42	-235	-136	-64	-45	+27	-45	-250	-227	-133	-262	-231	-117	-30	-8	+19	+23	-76	-99	-72	-61	-83	-75
8		-87	-53	-87	-11	-15	-68	-8	+140	+68	-280	-496	-413	-315	-174	+117	+49	+136	+8	-99	+42	+148	-30	-76	-171	-70
9	X	-140	-110	-76	-53	-68	-15	+83	+239	+212	-155	-402	-493	-356	-227	-76	0	+76	+42	-45	-27	-68	+102	-34	-102	-71
10	X	-91	-95	-102	-38	-30	0	+38	+129	+15	-182	-284	-345	-273	-227	-133	-23	+87	+49	-68	-57	-76	-83	-87	-76	-80
11	X	-19	-72	-38	+23	-27	-144	+197	+345	+205	-125	-440	-565	-432	-428	-235	-49	+45	+95	+38	+19	+152	-80	-121	-114	-74
12	X	-42	+8	+57	-64	+80	+102	+190	+315	+110	-99	-515	-546	-451	-269	-99	-38	+106	+106	-49	-34	-64	-83	-102	-80	-61
13	X	-91	-61	-95	-110	+30	+27	+182	+455	+186	-186	-318	-489	-466	-332	-265	-117	+95	+110	-34	-49	-80	-121	-27	+45	-71
14		+171	-61	-102	-76	-42	+30	+159	+163	+99	-64	-197	-201	-337	-455	-349	-201	+83	+201	+117	+133	-34	-114	-23	-38	-47
15		-102	-64	-114	+30	+34	+49	+182	+159	-23	-99	-303	-432	-436	-277	-133	-129	-27	-45	-15	-171	+250	+428	+455	+38	-31
16		-239	-284	-284	-27	-250	-19	+296	+326	+64	-193	-246	-262	-246	-155	-205	-152	-68	0	-45	-19	+61	+61	-205	-121	-92
17	X	-76	-76	-11	-45	-34	-53	+87	+296	+318	+30	-428	-440	-455	-356	-182	-30	-30	-8	-42	-11	-45	-76	-76	-64	-75
18	X	-34	0	-246	+8	-42	0	+205	+235	-76	-269	-311	-102	-121	-216	-190	-269	-227	-80	0	-23	-15	-11	-11	+64	-72
19		-80	-186	-174	-72	-182	+61	+110	+129	+80	+30	-299	-341	-413	-311	-174	-121	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	..	+61	-72	-402	-455	-212	-144	-197	-152	0	-125	-129	-8	+42	0	-34	+72	+15	..
21		-64	-152	-288	+190	+53	+38	+243	+205	+91	-72	-262	-315	-273	-258	-186	-140	-30	+68	+155	-19	-34	-42	-76	-133	-54
22		-99	-171	-34	-167	-45	+190	-212	+129	+227	-49	-243	-265	-144	-292	-239	-140	+106	+64	-11	+15	-15	+19	+106	-91	-57
23		-15	-38	0	0	-42	0	-19	+57	0	-140	-330	-413	-258	-178	-167	-8	-11	-8	-34	-11	+394	+129	+231	-208	-45
24		-258	-155	-72	+155	-250	+34	+114	+269	+231	-193	-436	-447	-307	-190	-76	-57	-30	-45	-114	-30	+148	-53	+91	+163	-63
25		-152	-57	-91	+11	-34	-15	+80	+148	-8	-174	-371	-397	-447	-144	-76	-49	+190	+15	-42	-49	-34	-45	-49	-45	-76
26	X	-23	-53	+38	+15	-19	+38	+186	+277	+34	-212	-269	-303	-280	-273	-265	+53	+148	+80	-38	-80	-68	-114	-8	-99	-51
27		+76	+57	-53	-11	-30	+53	+190	+258	-42	-485	-443	-322	-152	-80	+91	-15	-117	-15	-34	-27	+144	-178	-243	-129	-63
28	X	-83	-99	-80	0	0	+83	+318	+277	+57	-227	-417	-474	-326	-269	-148	+45	+61	+102	-38	-68	-38	-83	-80	-61	-64
29	X	-19	-27	-15	+8	+42	+34	+76	+288	+243	-155	-527	-568	-352	-231	-30	+8	+49	+42	-34	-42	-42	-53	-61	-57	-59
30		-76	-57	-15	+27	-30	+76	+371	+443	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		-81	-54	-104	-25	-34	+29	+123	+232	+113	-140	-339	-363	-332	-268	-141	-59	+37	+70	-17	-29	+13	-28	-10	-86	-62
MEANS 10 DAYS		-62	-58	-57	-26	-7	+7	+156	+286	+130	-158	-391	-432	-351	-282	-162	-42	+41	+54	-31	-37	-34	-60	-61	-54	-68

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										E 0°.5 N
		EASTWARD					LINE					OW					93.9					93.9										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1		-133	0	-212	-41	-158	+242	+150	+147	+351	+296	-112	-109	-182	-112	-79	-65	+131	+177	-139	-136	-324	+92	+65	-261	-17						
2		-226	-24	-44	-30	+112	-82	+14	+136	+112	+174	+112	+63	-250	-329	-177	-35	-35	+27	-22	-52	+35	0	-19	-106	-27						
3		-141	-16	-177	-52	-46	+16	-54	+41	+5	+122	+11	+84	+103	-68	-76	-95	-112	+101	+125	-155	-52	-117	+27	-109	-26						
4		+35	-24	-207	-95	+54	-11	-98	+109	+169	+44	-87	+171	-163	-63	+558	-38	+310	-378	-234	-147	-136	-22	+215	-11	-2						
5		-30	-220	-296	-237	-57	-109	+248	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	..	+52	+114	+101	+52	+30	+30	+152	+112	+79	+112	+163	+131	-207	-27	+122	+150	..
7		+139	+212	+109	+57	+73	+54	+30	-27	-22	-65	-68	-5	-171	-166	-87	-14	+30	+101	+60	-54	-44	-41	-27	-49	+1						
8		-71	-27	-46	-14	+35	-38	-22	+90	+82	-52	-163	-166	-182	-65	+54	+65	+14	+76	-54	+63	-60	+90	+46	-60	-17						
9	X	-79	-57	-52	-54	-73	-27	-14	+112	+109	+65	-33	-237	-207	-141	-101	-84	-44	-38	0	-11	-22	-5	+27	-54	-42						
10	X	+38	-63	+11	-30	0	-54	-33	-27	-95	-79	-24	-76	-68	-57	-71	-46	-33	-60	-73	+5	-30	-54	-52	-33	-42						
11	X	+8	-41	-19	+27	-35	-155	+106	+228	+188	+30	-84	-190	-169	-245	-190	-163	-79	+35	+63	+136	+103	+35	-41	-57	-21						
12	X	-44	-14	+19	-22	+27	+52	+79	+212	+196	+125	-185	-169	-160	-90	-98	-79	-14	+30	-54	-8	+22	-27	-35	-30	-11						
13	X	-68	-27	-82	-63	-24	+14	+139	+386	+340	+82	-11	-201	-261	-166	-199	-131	+19	+71	-15	-22	-24	-60	0	+68	-9						
14		+147	-19	-120	-98	-68	-8	+57	+114	+82	+57	+22	+52	-73	-182	-242	-264	-11	+92	+114	+190	-87	-106	+14	-19	-15						
15		-101	-60	-106	-19	+27	-11	+73	+163	0	-16	-144	-166	-174	-5	-30	-34	+49	-84	-90	-291	-220	+272	+552	+27	-18						
16		-174	-201	-337	-60	-101	-136	+152	+234	+109	-38	+22	+22	+19	+166	-245	-185	-133	-60	-30	+46	+190	+35	-131	-128	-40						
17	X	-38	-95	0	-52	-54	-106	-33	+201	+256	+128	-169	-182	-234	-122	-11	+19	-54	-44	-35	-11	-46	-49	-52	-54	-35						
18	X	-5	-14	-242	+24	-22	-11	+103	+166	-63	-174	-133	+65	+30	-44	-46	-152	-158	-38	+11	+24	+27	+57	+30	+35	-22						
19		-82	-103	-103	-27	-57	+27	+84	+79	+54	+152	+33	-98	-264	-231	-68	-65	+27	+46	+103	+160	+539	+141	+44	-277	+5						
20		-122	-65	-5	-54	-35	+19	+27	+44	-5	-160	-182	-11	-14	-30	+16	+90	-188	-190	-19	+112	+35	-14	+106	+52	-25						
21		-22	-128	-256	+136	+24	+22	+152	+182	+95	0	-14	-73	-98	-136	-114	-98	-63	-41	+30	+35	-5	-11	-71	-84	-22						
22		-128	-131	-95	-117	-5	+106	-76	+5	+117	+33	-30	0	+24	-98	-196	-147	+73	+22	-27	0	0	+16	-35	-54	-31						
23		+60	-14	-14	0	-68	-60	-106	+44	+33	+19	-33	-136	-169	-92	-57	-27	-76	+5	-76	+41	+277	+218	+117	-22	-6						
24		-267	-150	-71	+79	-199	+14	-5	+204	+231	+27	-103	-139	-155	-95	-46	-92	-82	-60	-79	+49	+316	-57	+171	+220	-12						
25		-144	-79	-95	+54	-35	-71	+5	+117	+95	-14	-152	-199	-264	+27	-11	+5	+52	-57	-63	-38	-41	+30	-44	-33	-40						
26	X	-14	-38	+35	+22	-14	-16	+106	+234	+41	-22	-27	-92	-155	-177	-44	+163	+109	+35	-33	+30	-57	-54	+5	-41	0						
27		+54	+49	-122	+8	+5	-5	+84	+155	+22	-207	-158	-52	+22	-24	+92	-38	-131	-33	-14	+60	+133	-163	-250	-152	-28						
28	X	-84	-117	-120	-54	-24	0	+196	+318	+307	+54	-125	-226	-196	-163	-147	-24	-19	+44	-65	-33	+14	-52	-41	-52	-25						
29	X	-35	-19	-52	-22	-8	-57	-24	+174	+245	+52	-160	-272	-147	-106	-82	-22	0	+30	-5	-24	-19	-27	-46	-76	-29						
30		-46	-63	-8	-38	-73	-84	+411	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS		-55	-47	-89	-18	-25	-10	+40	+142	+113	+23	-74	-87	-132	-104	-63	-59	-15	-7	-23	-1	+19	+5	+21	-50	-21						
ALL DAYS																																
MEANS		-32	-48	-50	-22	-23	-36	+62	+200	+152	+26	-95	-158	-157	-131	-99	-52	-27	+6	-20	+9	-3	-24	-20	-29	-24						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

TABLE 111

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1934
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
MAY 1934
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION										N 19° 5' E	MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1		..	..	..	..	..	..	..	+ 22	+ 91	+ 34	- 73	-125	-340	-401	-323	-190	- 95	+ 43	+224	-116	- 39	- 13	0	-353	..
2		+ 39	- 86	- 86	-116	+ 22	- 82	+ 56	+216	+453	- 13	-142	-207	-560	- 34	-181	-276	+237	+526	- 34	+241	-121	+427	+254	- 60	+ 20							
3		-228	-478	-259	-185	-138	-129	+ 22	+194	-172	-129	-216	-211	-371	-280	-358	- 43	-116	+ 17	+ 30	- 22	- 52	- 86	- 78	-47	-139							
4		- 82	-121	-211	- 43	- 65	- 43	- 22	+121	+ 86	-108	-267	-259	-138	- 82	-129	-125	-289	-151	- 95	-129	- 78	- 30	- 43	- 52	- 98							
5		- 86	- 56	- 52	- 17	-185	- 34	+164	+198	+185	-216	-353	-306	-147	-159	- 82	- 86	-138	-121	+ 43	- 30	+ 34	+ 86	-103	-134	- 69							
6	X	0	- 9	- 91	+ 9	- 78	- 91	- 56	+ 91	+129	- 82	-336	-315	-103	- 82	- 34	+103	+ 47	- 95	-203	-194	-185	-125	- 65	- 43	- 75							
7		- 43	- 34	- 47	- 30	- 22	-203	+ 91	+181	+ 65	-220	-310	-228	-272	-108	- 78	-172	- 91	+129	- 86	- 82	- 60	..	..	..	..			
8		..	..	..	..	..	..	..	..	..	..	-121	- 26	+ 39	+224	+340	+353	+375	+228	+207	+254	+280	+177	+259	+379	..
9	X	+246	+259	+198	+289	+172	+246	+358	+405	+267	- 86	-513	-526	-172	+203	+345	+392	+353	+409	+306	+ 73	+241	0	+ 43	- 34	+145							
10		+ 91	+ 99	+ 39	+121	+108	+172	+431	+522	+181	-392	-448	-392	-233	+ 43	+319	+198	+ 43	+ 60	- 52	+ 43	+ 45	+155	+289	+ 43	+ 62							
11		+108	+ 91	- 52	+125	+147	- 73	+263	+185	+ 34	-401	-556	-336	- 73	-340	-405	+108	+457	+375	+ 86	+500	+431	- 43	+ 39	-720	- 2							
12		+465	+ 86	- 34	-134	+ 65	+147	+340	+315	+ 43	-323	-560	-457	-147	0	+116	+220	+207	+241	-216	-116	-207	+116	-263	+ 52	- 2							
13		- 82	- 43	+ 52	+108	+ 43	+168	+328	+323	+336	- 91	-496	-474	-366	-267	-108	+116	+134	+142	+125	+ 60	- 86	- 52	+ 34	-129	- 9							
14	X	-129	- 95	0	0	+103	+134	+345	+388	+172	-336	-625	-530	-332	-121	- 34	+168	+203	+172	- 30	- 82	- 30	- 43	- 60	- 34	-33							
15	X	- 69	- 60	0	0	+ 86	+172	+336	+440	+302	-159	-431	-517	-465	-319	-168	+177	+129	+ 47	0	+ 52	+ 56	- 65	- 99	-125	- 28							
16	X	-116	- 52	- 47	- 91	+ 43	+ 60	+302	+384	- 17	-530	-634	-509	-302	-121	+ 78	+134	+129	+ 99	+ 39	+ 43	- 39	- 73	-108	-112	- 60							
17		- 95	- 95	- 60	- 65	+ 34	+ 47	+233	+345	0	-457	-599	-496	-332	-177	+129	+147	+121	+ 39	- 86	- 65	-116	-293	- 82	+ 9	- 80							
18		- 43	+228	+293	- 26	- 30	+565	- 95	+194	- 60	+353	-233	-185	- 60	+ 69	+220	+250	+241	+379	-405	-138	-142	-129	-125	-17	+ 46							
19		-216	- 22	-108	+ 47	+ 39	- 91	- 39	-151	-224	-259	-289	- 82	- 52	0	-129	+ 86	- 78	- 95	- 26	+ 30	- 43	- 56	- 60	- 86	- 79							
20	X	- 78	- 99	- 65	- 39	0	0	+181	+293	+302	-509	-431	-405	-349	-177	- 9	- 86	-151	- 60	+147	-185	- 52	- 56	-138	-228	- 91							
21		-116	-168	+ 95	- 95	+121	+ 34	+129	+233	+ 47	-138	-409	-509	-353	-147	+ 43	- 47	+ 82	+ 9	- 91	- 56	-103	- 9	+194	+138	- 46							
22		+168	-172	-142	- 99	+168	+147	+116	+190	+168	-422	-582	-664	-401	- 82	+103	+349	+172	+125	+ 52	- 95	-198	- 91	- 73	-384	- 69							
23		+259	+237	- 47	- 82	- 34	- 17	+129	+155	+ 52	-228	-453	-517	-340	-103	- 56	+134	+181	+ 65	- 56	- 91	- 82	- 52	- 56	- 65	- 44							
24	X	- 43	- 39	- 52	- 43	- 91	+ 78	+185	+259	+ 34	-397	-603	-728	-409	-483	- 34	+ 86	+211	+241	+ 65	0	- 17	0	+ 26	- 52	- 75							
25		- 30	0	0	- 30	- 65	- 78	+ 78	+203	+142	-129	-629	-733	-155	-345	+ 95	+328	+207	+168	+112	+ 34	0	+ 65	- 69	-155	- 41							
26		-147	- 47	- 86	- 26	+ 47	+108	+155	+ 39	0	- 69	-297	-310	-362	-263	-185	- 52	+ 73	+ 43	- 52	- 78	- 82	-121	- 73	- 39	- 76							
27	X	- 73	- 52	- 47	- 34	- 13	+ 26	+216	+272	+172	-181	-405	-457	-440	-276	- 22	+ 95	+134	+ 99	+ 43	- 56	- 78	0	- 13	- 34	- 50							
28	X	- 69	- 39	- 9	+ 17	+ 43	+134	+259	+306	+194	- 86	-289	-659	-690	-522	-267	+ 73	+203	+233	+ 9	- 60	- 47	- 82	- 86	- 52	- 62							
29		- 9	-112	- 13	+ 43	+ 13	+ 69	+263	+254	+203	-181	-621	-603	-534	-207	- 65	+ 91	+134	+297	+207	+116	..	..	..	..	..		
30		..	..	..	..	..	..	..	..	..	-272	-655	-595	-293	-112	- 9	+129	+185	+ 73	- 43	- 78	- 82	- 34	- 13	- 43	..
31	X	-159	- 22	- 52	- 73	+147	+151	+228	+254	+224	- 43	-366	-690	-586	-362	- 73	+108	+194	+168	+ 47	- 52	- 82	- 43	-112	-108	- 54							
MEANS ALL DAYS		- 19	- 29	- 32	- 19	+ 26	+ 67	+179	+245	+117	-209	-430	-441	-305	-170	- 32	+ 98	+115	+121	- 13	- 14	- 42	- 23	- 32	- 95	- 39							
MEANS 10 DAYS		- 49	- 21	- 16	+ 4	+ 41	+ 91	+235	+309	+178	-241	-463	-534	-385	-226	- 22	+125	+145	+131	+ 34	- 46	- 23	- 49	- 61	- 82	- 39							

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD					LINE		OW		LENGTH IN KMS 93.9										DIRECTION E 0°.5 N					MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		+121	-30	-35	-106	-53	-35	-80	+133	+268	+130	+118	+224	-224	+310	-21	-354	+699	+204	+268	+431	-248	+398	+316	+77	-369
3		+339	-440	-366	-201	-115	-183	-12	+142	-106	-100	0	+35	-130	-56	-56	+142	-24	-30	-21	0	+38	-18	-9	-15	-49
4		-77	-27	-221	-21	+30	-32	+124	+77	+15	-50	-118	-50	+86	+127	+59	-12	-254	-145	-77	-88	-12	-6	-24	-12	-30
5		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-127	-71	+100	+32	+30	+145	-145	-21	..
6	X	+121	+15	-6	+59	-47	-71	-44	-12	+71	-62	-59	0	+121	+86	+109	+266	+148	-6	-145	-189	-136	-59	-9	-18	+6
7		-47	-30	-59	+32	+27	-136	-56	+62	-12	-148	-94	+15	+109	+80	+80	-27	-18	+133	-80	-59	-24	-15	-15	+21	-11
8		+6	0	-24	+32	+59	-9	-18	+115	+32	-204	-301	-209	-212	-6	+209	+177	+192	+12	-65	-15	-6	-38	+15	+59	-8
9		-15	+32	-30	+30	-44	+71	+115	+168	+59	-112	-366	-472	-336	+24	+168	+327	+274	+212	+215	-47	+53	-32	-50	-198	+2
10		-9	-24	-94	-32	0	0	+180	+354	+201	-183	-204	-150	-153	-12	+295	+47	-124	0	-130	-15	+71	+145	+136	-15	+12
11		+91	+12	-97	+27	-6	-162	+6	+30	+32	-56	-150	-38	+6	-336	-351	+336	+324	+245	+27	+366	+245	-171	+35	-560	-6
12		+440	-74	-24	-18	-50	0	+118	+145	0	-218	-286	-227	-150	+15	+162	+183	+295	+88	-192	-80	-224	+41	-106	+77	-4
13		-65	-65	+115	+59	-27	+21	+136	+130	+286	-30	-189	-94	-177	-162	-121	+32	+56	+62	+148	+44	-24	-6	-53	-59	+1
14	X	-59	-77	-24	-30	+27	+18	+100	+280	+153	-109	-248	-204	-218	-109	-47	+65	+124	+168	0	-44	-27	-32	-38	-30	-15
15	X	-86	-30	0	-6	+62	+44	+145	+286	+239	+41	-91	-177	-268	-218	-174	+162	+41	-27	-24	+32	+121	+15	-56	-68	-2
16	X	-88	-41	-71	-59	+6	+30	+118	+212	+15	-233	-268	-263	-148	-32	+121	+130	+59	+15	-6	+27	-15	-27	-59	-86	-28
17		-88	-80	-56	-47	+12	-27	+91	+156	-6	-254	-254	-186	-148	-59	+239	+183	+139	0	-142	-103	-86	-68	-65	+268	-24
18		-86	+91	+431	+53	+310	+283	+62	+271	+124	+560	+56	+53	+162	+124	+324	+381	+230	+242	-384	-212	-289	-168	-136	-94	+100
19		-342	0	-103	+44	+100	-103	-71	-118	-316	-295	-150	+180	+171	+136	+32	+183	-32	-115	-44	+38	0	-41	-27	-71	-39
20	X	-44	-68	-56	-24	0	-35	+53	+139	+180	+27	-94	-9	-44	-86	-24	-56	-139	-130	+142	-124	0	-212	-50	-165	-34
21		-118	-109	+18	-118	+74	+53	+71	+148	+47	-15	-97	-224	-204	-41	+177	+32	+183	-6	-71	+30	-56	+32	+133	+71	0
22		+271	-88	-136	-174	+109	+109	+86	+133	+242	-265	-304	-381	-239	-35	+127	+339	+100	+159	+139	-18	-168	-62	-88	-516	-28
23		+274	+283	+324	-32	-27	+15	+127	+177	+80	-183	-133	-248	-165	+71	-30	+212	+177	+65	-59	-47	-59	-62	-59	-15	+29
24	X	-24	-21	-38	-27	-112	+35	+100	+218	+59	-322	-401	-375	-94	-354	-35	+71	+156	+186	+80	+32	-24	-12	+18	-59	-39
25		-30	-18	+24	0	-136	-136	+133	+215	+177	-50	-268	-422	-41	-389	+204	+209	+206	+62	+103	+106	+127	+153	-30	-174	+1
26		-133	-59	-115	-44	+15	-30	+41	+44	+59	+77	-44	-56	-71	-100	-106	-62	+15	-30	-59	-59	-74	-100	-24	-30	-39
27	X	-30	-32	0	-9	-18	-44	+62	+174	+239	-32	-83	-91	-145	-94	-59	-30	+6	-18	-62	-30	-56	-56	-21	-53	-20
28	X	-50	-59	-59	-32	-24	+6	+68	+88	+50	-15	-35	-265	-313	-242	-180	+24	+142	+148	-6	+18	+6	-30	-38	-35	-35
29		-6	-83	-21	+12	-47	-41	+121	+91	+142	-121	-280	-189	-268	-41	+30	+118	+118	+91	+56	+65	..	..	..	..	..
30		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+77	-44	-83	-59	-32	+21	+47	+32	..
31	X	-124	-15	-59	-41	+53	+59	+86	+192	+327	+177	-118	-316	-322	-233	-118	-32	+86	+71	+62	+38	0	-6	-53	-97	-16
MEANS ALL DAYS		+6	-35	-28	-25	+8	-10	+64	+147	+93	-71	-155	-146	-117	-59	+36	+108	+113	+58	-14	+1	-32	-16	-13	-68	-6
MEANS 10 DAYS		-40	-30	-34	-14	-10	+11	+80	+174	+139	-64	-176	-217	-177	-126	-24	+93	+90	+62	+26	-29	-8	-45	-36	-81	-18

* = 10 LEAST DISTURBED DAYS

TABLE 113

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1934

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

JUNE 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LINE ON		LENGTH IN KMS				56.8				DIRECTION				N 19° 5 E			
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1	X	- 90	-107	-128	- 73	- 34	0	+ 90	+218	+ 81	-137	-342	-475	-479	-270	-137	+ 9	+103	+150	+ 81	+ 26	- 47	- 39	-120	- 81	- 75			
2	X	- 68	- 34	- 56	- 30	- 17	+ 13	+ 98	+ 56	- 21	-175	-248	-415	-441	-223	-146	+ 98	+128	+ 86	- 73	- 86	- 47	- 34	- 39	- 43	- 72			
3	X	- 47	- 39	- 39	- 21	- 51	- 21	+ 86	+ 94	+ 51	-214	-339	-312	-257	-253	-154	+ 21	+116	- 51	-240	-163	-128	- 81	- 21	- 21	- 87			
4		- 51	- 56	- 47	- 26	+ 60	- 30	+ 60	+ 86	- 77	-154	-231	-317	-372	-107	- 21	+ 60	-133	+111	+244	+304	- 17	+128	-171	- 17	- 32			
5		-116	- 43	+205	+321	+334	-103	+ 39	+ 34	-646	-124	-150	-394	-514	-175	-116	+261	+154	+488	+128	- 68	-253	- 9	+244	+ 68	- 18			
6		-462	+253	-518	+ 56	+128	+116	+205	+120	-270	-334	-295	-325	-154	-287	-231	-171	-124	+240	-107	-116	-128	-150	+ 77	-231	-113			
7		+ 21	-103	- 77	- 64	- 43	+103	+128	+180	- 77	-428	-565	-514	-253	- 26	+ 94	+214	+214	+ 39	-103	-133	- 86	- 81	- 77	- 81	- 72			
8		- 51	+ 39	- 13	- 68	- 26	0	+205	-240	-282	-505	-454	-428	+428	+197	-128	+257	+227	- 51	- 43	+291	+171	-334	-304	- 43	- 48			
9		-146	- 94	-184	- 77	+193	-167	+321	+180	- 30	-116	-257	-321	-261	-274	-124	+ 77	+ 86	- 47	-197	-120	- 60	-158	-128	- 68	- 82			
10	X	- 81	- 56	- 56	- 39	+ 9	+103	+240	+407	+231	-265	-484	-377	-381	-197	-308	- 26	+ 81	+ 94	- 34	- 94	-128	- 90	-124	-120	- 71			
11		- 60	-120	- 86	0	+ 81	+180	+347	+475	+265	-758	-672	+257	-535	-402	-278	+146	+312	+544	-248	- 68	+805	+107	-265	-385	- 15			
12		-158	-124	- 34	- 64	- 43	- 21	+ 86	+210	+103	-244	-535	-334	-437	-278	-133	+ 17	+ 51	+103	- 39	-141	-137	- 56	+ 68	-171	- 96			
13		- 94	-128	- 98	- 60	-253	+111	+235	+244	-214	-565	-398	-223	-167	- 43	- 17	+ 60	+124	+ 34	-128	-133	- 64	-167	-116	-137	- 92			
14		-107	- 90	- 73	- 39	- 26	- 51	+ 90	+205	+351	- 86	-548	-715	-659	-253	- 68	+171	+261	+274	+253	+372	+368	+ 47	-325	-107	- 31			
15		-304	-321	-300	-184	- 47	- 9	+175	+150	+ 51	- 90	-295	-591	-522	-321	-158	- 34	+ 39	+ 30	- 17	-107	-150	- 86	- 77	- 68	-135			
16		-146	-184	-124	- 56	+ 9	+ 64	+171	+240	+158	+ 86	-437	-890	-655	-188	- 77	+ 47	+ 34	+ 39	- 26	- 43	+116	-137	-167	+ 9	- 90			
17		+ 68	-107	- 64	0	+ 21	- 17	+120	+180	+ 68	-253	-479	-685	-651	-270	-116	- 60	+171	+133	+ 26	-175	- 86	- 73	+ 13	+ 43	- 91			
18		- 43	-210	- 9	- 39	- 73	- 86	- 73	+231	+180	- 86	-595	-638	-505	-201	- 56	+124	+154	+188	+ 47	- 86	-103	- 86	- 51	- 90	- 88			
19		-193	- 56	+ 17	- 26	+ 81	+ 34	+ 56	+ 73	+ 26	-128	-291	-445	-355	-235	-111	+ 9	+ 47	- 9	- 34	-111	-201	- 34	-175	+ 21	- 85			
20	X	-103	- 26	- 90	- 21	- 34	- 51	+ 30	+163	+ 60	- 51	-402	-492	-381	-330	- 56	- 21	- 13	- 26	- 81	- 86	- 77	- 86	- 81	- 47	- 97			
21	X	- 47	- 86	- 81	- 81	- 77	- 43	+ 90	+ 94	- 94	-244	-381	-552	-402	-304	-120	- 47	+ 34	+ 9	0	- 68	- 86	- 56	+ 9	- 56	-108			
22	X	- 56	- 90	- 47	- 60	- 68	+ 34	+ 90	+163	+ 86	- 90	-372	-642	-599	-535	-526	+ 43	- 43	- 13	- 51	-128	-124	- 94	-116	- 13	-136			
23		- 43	- 77	- 43	+ 9	- 13	- 43	+124	+ 86	+ 34	-188	-535	-595	-462	-141	+ 34	+ 43	0	+ 51	- 86	-128	-137	- 77	- 30	+ 43	- 91			
24	X	+ 47	+ 9	- 39	+ 21	+ 43	+ 43	+ 86	+120	+ 90	-120	-445	-437	-385	-248	-137	+ 34	- 13	+ 34	- 68	-158	-120	-116	- 81	- 17	- 77			
25	X	+ 34	- 86	- 56	- 51	- 26	- 47	+ 51	+193	+ 86	-193	-368	-428	-381	-184	- 60	- 90	-167	-137	- 30	- 26	-111	- 73	- 98	- 60	- 96			
26	X	- 73	- 60	- 30	- 39	- 34	- 51	+ 90	+ 90	+ 17	-128	-325	-441	-428	-308	-141	+ 9	+ 34	- 47	- 77	- 77	- 90	- 60	- 90	- 86	- 98			
27		- 68	- 39	- 77	- 51	- 17	- 73	+ 56	+ 51	+146	-261	-180	-467	-449	-257	- 64	- 13	+146	+ 43	-124	-163	-137	-128	-137	+ 21	- 93			
28		-120	-150	-167	- 34	- 90	- 26	+188	+171	- 9	-334	-518	-415	-231	-304	- 68	-150	+111	+411	+163	- 26	- 64	-227	-188	-146	- 93			
29		-124	-128	- 77	- 43	- 9	- 21	+ 90	+223	+111	-201	-428	-514	-462	-385	- 86	+ 68	+ 51	- 81	-171	-163	-128	-120	-137	-128	-119			
30		-128	-124	- 90	-124	+ 86	+133	+167	+227	+103	-351	-805	-728	-475	-180	- 13	+ 34	+214	+107	+ 30	- 21	+163	+193	-201	-235	- 84			
MEANS ALL DAYS		- 94	- 81	- 83	- 32	+ 2	+ 2	+125	+157	+ 19	-225	-412	-462	-394	-233	-117	+ 40	+ 80	+ 92	- 34	- 56	- 36	- 73	- 97	- 75	- 83			
MEANS 10 DAYS		- 48	- 58	- 62	- 39	- 29	- 2	+ 95	+160	+ 59	-162	-371	-457	-413	-285	-178	+ 3	+ 26	+ 10	- 57	- 86	- 96	- 73	- 76	- 54	- 91			

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD										LINE SLO										LENGTH IN KMS										93.9 DIRECTION E 0.5 N									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN													
1	X	-12	-35	-56	-50	-41	-67	0	+144	+111	-32	-44	-149	-220	-56	-70	+26	+76	+79	+29	0	-44	-41	-79	-62	-25													
2	X	-47	-23	-67	-56	-38	-67	+70	+23	-47	-138	-59	-85	-97	-38	+44	+179	+126	+47	-82	-56	-23	-35	-21	-29	-22													
3	X	-44	-47	-12	-18	-21	-23	+44	+23	-29	-146	-126	-64	-62	-26	+29	+94	+205	-64	-264	-164	-88	-53	+6	-6	-36													
4		-44	-38	-35	+6	+47	-59	-97	-70	-15	-132	+9	-41	-179	+21	+64	+176	+9	+270	+428	+442	+120	+214	-501	+29	+26													
5		-100	-50	+100	-94	+316	-29	+26	+158	-398	+73	+18	-70	-281	-103	-38	+264	+451	+498	+422	+35	-284	-47	+152	+59	+45													
6		-615	+363	+316	-38	+94	+12	+135	+76	-105	-82	-155	-343	-152	-176	-123	-18	+88	+190	-50	-70	-105	-94	-59	-170	-71													
7		+38	-50	-15	-26	-32	+56	+62	+211	+100	-190	-240	-278	-129	+32	+132	+185	+249	+100	-59	-76	-56	-59	-53	-59	-7													
8		-26	+47	-50	-21	-59	-103	+56	+346	-97	-349	-226	-158	-231	+176	+73	+404	+167	-170	-79	+176	+15	+29	-179	-9	-11													
9		-120	-35	-141	-94	+70	-94	+100	+9	-9	+29	+76	+56	+29	-79	-6	+79	+100	-64	-155	-94	-73	-97	-85	-29	-26													
10	X	-23	0	-23	+9	0	-44	+117	+308	+278	-67	-170	-94	-170	-23	-205	-15	+32	-9	-41	-59	-64	-44	-82	-56	-19													
11		-29	-108	-111	-44	-47	+85	+199	+314	+141	-223	-387	-246	-202	-173	-108	-249	+293	+689	-360	-182	+398	+299	-182	-261	-21													
12		-120	-59	-21	-70	-132	-190	-164	+120	+114	-146	-62	-18	-94	-6	+9	+91	+29	+44	-62	-117	-79	+6	+97	-111	-39													
13		-6	-76	-62	-29	-88	-15	+23	+173	-38	-316	-158	-47	-23	+123	+67	+88	+94	0	-94	-85	-73	-38	-47	-64	-29													
14		-26	-35	-41	-18	-6	-85	-67	+44	+229	+64	-158	-202	-322	-41	+97	+281	+229	+311	+328	+299	+393	+64	-325	-548	+19													
15		-32	-132	-152	-144	-73	-114	+12	-6	+29	+38	-15	-152	-220	-76	-26	+18	+59	+9	+26	-41	-79	-38	-23	-47	-49													
16		-114	-100	-120	-132	-32	-41	-6	+132	+120	+226	-62	-454	-340	+88	+85	+103	+32	+38	-64	-23	-15	+62	-91	+79	-26													
17		+88	-21	+6	+32	+62	-21	+44	+56	+91	-105	-287	-360	-334	+29	+6	-41	+155	+111	+62	-126	-64	-94	+38	+152	-22													
18		+50	-179	+56	-64	+73	-41	-94	+173	+76	+100	-220	-170	-108	+82	+170	+217	..	..	..	..	..	..	..	..	..				
19		..	..	..	..	..	..	..	+88	+91	-21	-105	-205	-161	-6	+117	+149	+88	-21	-38	-64	-182	-15	-205	+146	..						
20	X	-35	+29	-62	+9	-12	-56	-6	+182	+103	+41	-141	-182	-138	-243	+100	+47	+79	-18	-50	-38	-59	-41	-50	-9	-23													
21	X	+23	-35	-38	-32	-56	-56	+32	+73	-12	-144	-146	-255	-185	-103	-15	-15	+44	0	+26	0	+6	+15	+23	+18	-35													
22	X	-6	-44	-23	-64	-85	-38	-15	+179	+205	+111	-138	-316	-220	-264	-35	+32	-9	+23	-32	-64	-53	-56	-35	+35	-38													
23		-6	-47	-29	+29	-26	-82	+15	+97	+18	-158	-234	-281	-196	+129	+132	+117	+64	+29	-56	-41	-59	+29	+47	+59	-19													
24	X	+132	+21	-53	-29	+18	-85	-76	+41	+88	-41	-185	-59	-64	-38	+29	+62	-6	+18	-76	-76	-35	-56	-23	+38	-19													
25	X	+85	-53	+12	-26	-38	-105	-59	+117	+88	-64	-23	-35	-158	-41	+120	+64	-141	-190	-50	-6	-38	-6	-64	-6	-26													
26		-21	-56	-6	-29	-26	-50	-47	-23	-15	-62	-126	-91	-44	-29	+6	+62	+56	-6	-70	-53	-21	+15	-38	-26	-29													
27		-26	-35	-76	-73	-35	-141	-120	-29	+141	-91	+70	-47	-64	-111	+117	+141	+231	+111	-129	-111	-79	-38	-62	-47	-21													
28		-18	-62	-67	-32	-70	-64	+82	+129	-56	-270	-182	-164	+29	+32	+237	-88	+149	+352	+173	-41	+62	-158	-120	-85	-10													
29		-62	-67	-47	-32	-32	-129	-85	+149	+126	-100	-79	-105	-85	-94	..	..	..	..	..	..	..	..	..	..	..		
30		+111	+50	-231	-434	-284	-88	+50	+76	-656	+586	+47	-158	..												
MEANS ALL DAYS		-42	-26	-56	-40	-12	-57	+14	+109	+40	-84	-121	-159	-156	-38	+28	+80	+110	+92	-11	-22	-15	-10	-68	-44	-20													
MEANS 10 DAYS		+5	-24	-33	-29	-30	-59	+6	+107	+77	-54	-116	-133	-136	-86	0	+54	+46	-12	-61	-52	-42	-30	-36	-10	-27													

TABLE 115
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
JULY 1934

JULY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										DIRECTION N 19°.5 E																
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-129	-137	-82	-99	+64	+167	+245	+356	-43	-502	-794	-644	-378	-223	-184	-43	+43	+129	+120	+9	+21	+51	-9	-26	-89
2		-176	-64	-163	-47	-9	+184	+137	-13	-150	-378	-536	-652	-386	-172	+69	+219	+476	+339	+197	+56	-34	-43	-34	-17	-50
3		-82	-13	-77	-802	-605	+236	-172	+322	+347	-296	-172	-107	+94	+124	+64	+124	+202	-34	-300	-292	-296	..	..	..
4		-134	-43	-94	-202	+56	+116	+133	+69	+116	-322	-343	-408	-313	-202	-26	+82	+43	+26	+163	+103	+214	-369	-34	+146	-51
5		-189	-167	-249	-133	-129	-120	+94	+129	+86	-309	-528	-343	-103	-82	-112	-56	-43	-21	-73	-77	+34	+167	-245	-163	-110
6		-129	-86	-43	-77	-73	+21	+146	+214	+43	-214	-438	-699	-498	-137	-77	+86	+82	+26	+86	+167	-159	-176	-180	-90	-99
7		-39	-86	-60	-69	-30	+112	+184	+227	-21	-266	-313	-446	-339	-206	-82	-13	+86	0	+34	-82	-99	-34	-64	-39	-69
8		-137	-94	-129	-26	-26	+86	+163	+275	+159	-167	-463	-631	-562	-343	-214	+17	+197	+266	+9	-60	+210	-34	-137	-142	-74
9		-326	-90	-137	-9	-120	+4	-107	+326	+172	-64	-313	-811	-639	-292	+69	+296	+382	+266	-34	-60	-154	-99	-180	-114	-114
10	X	-69	-86	-26	-39	+32	+56	+232	+227	+17	-202	-596	-601	-502	-532	-292	-51	+240	+300	+172	-26	-64	-124	-129	-116	-91
11	X	-172	-116	-86	-60	-9	+77	+232	+219	+26	-180	-622	-433	-322	-287	-193	+103	+172	+266	+30	-120	-64	-82	-232	-146	-83
12		-176	-120	-51	-17	-26	+107	+137	+180	-142	-468	-776	-631	-472	-82	-13	+219	+266	+94	-43	-90	-77	-124	-129	0	-101
13		-150	-39	0	-51	+90	-43	+172	+197	+129	-197	-506	-652	-652	-601	+34	+167	+214	+133	-13	-47	-112	-99	-86	-124	-93
14		-129	-120	-94	-124	-103	+21	+206	+378	0	-77	-172	-129	-227	0	+107	+245	+438	+347	+742	+772	+120	+129	+39	-129	+93
15		-214	-120	-43	-64	-26	-26	+300	+313	+262	+13	-227	-335	-592	-553	-459	-232	+34	+206	+399	0	-167	-60	-493	-219	-97
16		-17	-69	-305	+47	-39	+43	+90	+172	+103	-34	-176	-455	-626	-459	-309	-82	+172	+197	+150	+69	+82	+26	-60	-21	-63
17	X	-86	-56	-51	+34	-9	+172	+232	+347	+124	-214	-343	-300	-283	-223	-172	+21	-47	-34	+34	-73	-56	+107	-43	-99	-42
18	X	-64	-82	-77	+9	+26	-39	+219	+347	+343	+90	-257	-575	-725	-227	-133	-146	+150	+223	+120	-39	-86	0	-56	-77	-44
19	X	-56	+34	-133	-60	+56	-43	+69	+253	+167	-9	-219	-373	-429	-347	-296	-129	-13	+86	+39	0	-39	-34	+13	+47	-59
20	X	+9	+69	-26	-43	+43	-82	+43	+390	+360	-172	-442	-420	-343	-107	-73	-94	-30	-21	-73	-34	-39	-34	-9	-26	-48
21	X	+4	-43	-26	-9	+9	+21	+129	+206	+60	-210	-292	-223	-210	-223	-103	-172	-172	-69	-103	-26	-86	-64	-21	-43	-69
22	X	0	-17	-43	+103	+9	+30	+90	+112	+51	-219	-511	-455	-176	0	+112	+82	0	-43	-47	-133	-51	-60	-56	-9	-51
23		-94	-21	+9	0	+77	-39	+124	+159	-34	-262	-455	-438	-309	-124	-9	+43	+13	-43	-90	-86	-64	-64	-43	-94	-77
24		-26	-202	-64	-9	-17	+86	+347	+382	+64	-262	-562	-536	-300	-197	-51	+43	+99	+73	-9	-99	-159	-150	-43	+17	-66
25		-103	+90	+86	+30	+30	+30	+253	+390	+257	-292	-253	-463	-227	-129	-257	-154	+172	+51	-56	-9	+82	-163	-73	-60	-32
26	X	-86	-43	-43	-56	-82	+51	+386	+571	+429	-309	-892	-837	-686	-420	-39	+154	+257	+193	+17	-107	-99	-116	-129	-86	-82
27	X	-112	-73	-34	+64	+26	+39	+313	+588	+480	-47	-480	-626	-566	-515	-360	-202	+9	+146	+47	-86	-64	-43	-90	-69	-69
28		-21	-82	-9	0	+43	+129	+305	+420	+129	-283	-841	-897	-807	-343	-99	+124	+262	+390	+472	-197	+26	-26	-176	-120	-67
29		-51	-279	+214	+433	+133	+129	+343	+253	+287	-227	-695	-579	-502	-386	-163	-193	0	+99	+21	-21	-712	+73	+158	+935	+111
30		+77	+712	+223	-86	-553	+180	-77	+214	+317	+82	-515	-970	-1231	-1055	..	..	..	..	..	..	..	..	..	..	..
31		..	..	..	..	..	..	..	..	..	-189	-412	-515	-442	-317	-330	-150	-86	+116	+588	+26	-219	-51	-77	-227	..
MEANS ALL DAYS		-101	-78	-62	-10	-2	+43	+188	+282	+124	-202	-470	-525	-446	-280	-136	+1	+125	+138	+84	+14	-65	-42	-53	-41	-64
MEANS 10 DAYS		-63	-41	-54	-6	+10	+28	+194	+326	+206	-147	-465	-484	-424	-288	-155	-43	+57	+105	+24	-64	-65	-45	-75	-62	-64

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	* 	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		- 74	-107	- 33	- 47	+ 83	+ 86	+124	+293	+ 50	-266	-334	-311	-101	- 15	- 74	- 68	+ 38	+204	+201	+151	+ 27	+133	- 36	+ 24	- 2						
2		-172	- 12	- 65	- 59	- 6	+107	+ 30	+ 27	- 95	-184	-178	-266	-154	- 38	+112	+308	+258	- 24	-189	+ 56	- 38	- 62	- 27	- 18	-29						
3		- 98	- 33	- 62	-468	-817	+139	-142	+334	+364	- 50	+ 77	+263	+397	+370	+186	+222	+260	+ 47	+145	+ 59	-302	..	..	..	..		
4		-100	+ 30	0	-207	- 9	- 18	+ 12	+104	+130	-148	- 89	- 47	- 86	- 83	+104	+207	+142	+136	+172	+136	+ 21	-346	+148	- 6	+ 8						
5		-104	+ 98	-107	- 83	- 59	- 53	+ 27	+124	+ 30	-234	-290	-112	- 12	+ 77	+ 92	+104	+ 68	+ 74	- 33	- 18	+112	-207	+ 30	+ 24	-19						
6		- 36	- 59	- 15	- 50	- 59	- 65	+ 77	+198	+ 56	-112	- 15	-385	-231	- 6	+ 44	+166	+124	+ 53	- 47	+ 27	- 86	- 33	- 95	- 41	- 25						
7		+ 30	- 41	- 62	- 24	- 59	+ 12	- 36	+148	- 12	-145	-118	-136	+ 44	+ 89	+ 65	- 21	+ 89	+ 56	+ 59	- 12	- 27	- 47	+ 53	+ 95	0						
8		- 89	- 50	- 71	+ 18	+ 24	+ 6	+ 62	+175	+243	- 30	-207	-302	-263	-118	-160	+ 77	+181	+207	+ 6	- 59	+121	+ 65	- 30	-272	- 19						
9		-118	+ 77	-112	- 6	- 95	- 86	-112	+ 9	+ 30	+181	+ 56	-355	-332	-269	-148	+ 59	+198	+323	+198	+ 47	- 33	- 95	- 44	-130	-32						
10	X	+ 30	- 36	0	+ 6	- 18	0	+118	+148	+ 62	- 41	-124	-175	-169	-302	-154	-118	+107	+231	+145	- 6	- 36	- 44	- 86	- 36	- 21						
11	X	-124	- 80	- 86	- 65	- 59	- 38	0	+ 9	+ 33	+ 56	-107	- 50	+ 18	+127	- 74	+ 95	+115	+201	+ 30	- 62	0	- 36	-154	- 56	- 13						
12		-107	- 74	- 59	+ 33	- 15	+ 30	+ 59	+ 92	- 44	-323	+225	-240	-181	+ 15	+ 86	+258	+314	+ 86	- 15	- 15	- 30	- 47	- 50	+ 92	+ 4						
13		- 89	+ 47	+ 71	- 21	+ 62	- 65	- 41	+ 44	+130	+ 33	- 12	-231	-411	- 15	+121	+166	+210	+142	0	+ 36	- 9	-133	+ 6	- 30	0						
14		- 59	- 62	- 77	-154	-115	-104	+ 59	+142	-181	- 86	-195	- 68	-225	- 92	-118	+ 41	+240	+382	+731	+607	+121	+104	0	-107	+ 33						
15		-352	-204	- 44	-110	-127	-184	+ 38	+ 89	+204	+ 44	- 6	- 44	-175	-234	-222	-115	+ 24	+186	+210	+101	- 80	- 74	+314	- 92	- 36						
16		+ 59	- 36	-255	+ 56	- 59	- 38	-110	+ 15	+ 59	+110	+ 44	- 86	-201	-364	-269	- 24	+213	+169	+104	- 21	- 24	- 27	- 36	- 6	- 30						
17	X	- 65	- 24	- 56	+ 9	- 53	- 12	+ 59	+266	+ 77	- 89	- 27	- 24	- 15	+ 6	+107	+ 74	- 89	- 80	+ 27	- 38	0	+ 59	+ 41	- 41	- 4						
18	X	- 36	- 24	- 24	+ 24	+ 53	- 77	+ 50	+231	+346	+231	+ 24	-237	-379	-278	-329	-118	+136	+169	+112	+ 9	- 53	+ 47	+ 24	- 56	- 5						
19	X	- 21	+ 6	- 71	- 44	+ 68	- 89	- 18	+184	+148	+ 56	- 6	- 89	-101	-142	-157	-115	- 53	+ 15	+ 53	+ 44	+ 59	+ 18	+ 33	- 9	- 20						
20	X	+ 18	- 30	+ 6	- 30	- 56	- 59	0	+320	+323	- 47	-145	- 80	- 86	+ 56	+ 47	- 24	- 9	- 56	-118	- 36	- 30	- 12	- 12	- 6	- 2						
21	X	+ 30	- 36	- 30	- 6	+ 24	- 30	0	+ 92	+ 77	-118	- 89	+ 24	+ 15	0	+124	- 27	- 86	- 36	- 95	- 47	- 92	- 56	- 18	- 50	- 18						
22	X	- 24	+ 12	+ 33	+ 89	+ 59	+ 6	+ 30	+ 92	-101	-192	-332	-116	+ 24	+160	+240	+178	+ 89	0	- 62	-104	- 30	- 6	- 83	+ 53	- 1						
23		- 77	0	+ 30	+ 56	+ 38	- 83	- 30	+ 53	+ 41	- 36	-127	-151	- 71	+ 24	+ 30	+ 36	+ 18	- 38	- 80	- 74	- 24	..	..	..	..		
24		..	..	..	..	..	..	..	-252	- 41	-314	-237	-166	+130	+ 71	+ 30	+ 33	+112	+ 24	- 12	- 59	-112	-184	- 15	+ 50	..
25		-110	+ 6	+ 30	- 36	- 18	- 86	+ 38	+302	+260	-110	-361	-207	- 95	- 12	- 98	- 80	+388	+ 21	- 56	+ 65	+154	-104	- 53	- 41	- 8						
26	X	- 92	- 83	- 62	-115	0	- 41	+145	+515	+465	- 18	-453	-376	-417	-311	+ 6	+127	+178	+178	+ 74	- 56	- 62	- 44	- 83	-222	- 31						
27	X	- 24	- 21	- 30	- 21	- 36	- 65	+130	+441	+400	+ 62	- 65	-192	-151	-290	-252	-145	- 71	+ 30	0	- 71	- 36	- 18	- 71	- 92	- 24						
28		- 86	- 95	- 50	- 27	- 21	+ 18	+118	+237	+107	- 98	-192	-184	-364	-160	- 36	-400	+204	+207	+175	+231	+ 56	+ 6	-121	- 80	-23						
29		- 44	-234	+127	+352	+181	+ 59	+ 92	+148	+240	- 9	-266	-136	- 89	- 98	+ 15	-148	- 74	- 18	- 68	- 71	-397	+104	+947	+1291	+ 79						
30		+ 83	+500	+441	- 68	-145	- 65	-382	-308	+ 92	+216	- 44	-231	-160	-118	-480	+127	+130	+ 89	+121	- 71	- 33	+ 71	+ 56	- 47	- 9						
31		-104	- 71	-112	- 6	- 68	- 80	+ 6	+160	+426	- 9	-198	-326	- 77	+ 6	-195	- 95	- 92	+115	+669	-166	+ 24	-234	- 30	- 59	- 22						
MEANS ALL DAYS		- 62	- 23	- 26	- 13	- 19	- 34	+ 21	+155	+127	- 42	-126	-185	-159	- 86	- 71	+ 10	+105	+108	+ 83	+ 19	- 16	- 25	+ 18	+ 3	- 10						
MEANS 10 DAYS		- 31	- 32	- 32	- 12	- 2	- 40	+ 51	+230	+183	- 10	-132	-136	-126	- 97	- 66	- 7	+ 32	+ 65	+ 17	- 37	- 28	- 9	- 38	- 52	- 23						

* = 10 LEAST DISTURBED DAYS

TABLE 117
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT						LINE		LENGTH IN KMS				DIRECTION				N 19.5 E								
		NORTHERLY			SOUTHERLY			OM	ON	56.8		56.8		56.8		56.8		56.8								
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-516	+215	-125	-224	+47	+172	+211	+396	+331	-64	-370	-520	-400	-241	-189	-82	+86	+189	+43	-69	+22	-112	-168	-138	-63
2		-77	-404	+47	+22	+168	+60	+163	+417	+275	-262	-654	-585	-383	-138	-43	+73	+138	+95	+129	-456	+82	+434	+120	-258	-43
3		-224	-176	-133	-168	-439	-26	+434	+580	+383	-125	-271	-808	-555	-172	+43	+52	+258	+327	-129	-172	+249	-39	+284	+90	-31
4		-826	+69	+47	+47	+90	+56	+30	+198	+13	-297	-546	-563	-550	-34	+146	+172	+370	+198	+202	-275	+284	-593	-555	-271	-108
5	X	-215	-172	-155	-224	+43	+52	+133	+249	+168	-400	-580	-477	-374	-211	-26	+202	+82	-60	+120	-95	-168	-103	-172	-206	-108
6		-249	-189	+353	+26	-9	+64	+172	+267	-99	-400	-628	-580	-348	-150	-90	+133	+116	+86	-52	-120	-95	-69	-176	-64	-88
7		-142	-211	+64	-421	+189	+142	+206	+331	+262	-125	-559	-568	-348	-262	-95	+258	+314	+224	+43	+52	+69	+77	+172	+133	-8
8	X	+129	+215	-112	+434	+387	+172	+482	+546	+340	+34	-318	-344	-108	+73	+258	+125	-13	+138	+73	-64	-26	-39	-39	-52	+95
9	X	-103	-64	-43	-17	+60	+77	+206	+559	+396	-125	-516	-727	-538	-353	-90	+64	+224	+241	+168	0	+116	+353	+103	-538	-23
10		+116	-211	-129	-86	-43	+43	+215	+305	+133	-396	-645	-662	-391	-215	-150	+64	+22	+17	+13	9	0	-172	-39	+116	-87
11		-99	-43	+43	+73	+82	+52	+206	+473	+366	+9	-615	-826	-645	-258	-22	+13	-34	-82	-133	-224	-142	-442	-340	-430	-126
12		-456	-520	-284	-353	-430	-327	+9	-43	-228	-860	-1084	-1006	..	..	..	..	..	..	..	..	..	..	..	..	..
13		..	..	..	..	..	..	..	-770	-886	-1015	-1152	-1182	-1200	-619	+39	-275	-39	+120	-86	-116	-39	-34	-82	-120	..
14		-43	-176	-129	-9	-34	+86	+318	+421	+198	-288	-486	-533	-684	-284	-194	-60	-56	+116	+17	-82	-13	-77	+133	-236	-87
15	X	-30	-90	-125	-30	-43	+39	+138	+284	+318	-155	-598	-611	-387	-426	-494	-108	+181	+215	-26	+34	-103	-52	-82	-60	-95
16	X	-86	-125	-95	-82	-73	+69	+133	+262	+146	-267	-538	-499	-456	-275	+52	-56	+9	+236	-60	+56	+86	+43	-43	+56	-63
17		-82	-172	-146	-168	-138	-43	+120	+34	-292	-159	-335	-486	-447	-206	-344	-400	+297	-56	+47	+103	+13	-181	-116	-129	-137
18		-52	-43	-297	+43	+43	-9	+112	+194	+108	-47	-486	-624	-783	-572	-163	+219	0	+426	+77	+9	+172	+34	-43	-120	-75
19	X	-189	-236	-150	-116	-133	-125	+335	+654	+86	-774	-671	-301	-52	+86	+120	+30	-26	-129	-112	-60	-86	-82	-77	-52	-86
20	X	-52	-168	-129	-39	-69	+95	+129	+271	-34	-503	-666	-490	-232	+86	+133	+133	+43	-86	-176	-150	+43	+43	+292	+206	-55
21	X	+150	-275	-292	+26	-9	-64	-77	+64	-86	-430	-439	-335	-292	-129	-43	0	+64	+69	-301	-82	-155	-22	-52	-421	-130
22		+456	-43	-82	-73	-34	+13	+241	+194	-116	-219	-396	-456	-232	-176	-64	+9	-9	+9	-103	-198	-138	-120	-211	-194	-75
23		-138	-112	-86	-43	-34	+43	+292	+439	+163	-417	-563	-602	-292	-400	-120	+155	-39	-86	-56	-69	-43	-142	-138	-43	-97
24	X	-95	-176	+17	-39	+43	+95	+335	+559	+318	-211	-671	-955	-774	-490	-77	+120	+172	+120	-39	-133	-82	-47	-69	-86	-90
25	X	-116	-69	-86	-56	0	+22	+198	+456	+310	-82	-538	-817	-654	-512	-292	-47	-249	-262	-30	-129	-17	-60	-241	-254	-147
26		-185	-120	-86	-34	+34	+30	+232	+503	+555	+129	-262	-426	-542	-525	+150	-400	+64	+241	+262	+490	-64	+636	+47	-645	+6
27		-555	-555	-155	-90	+64	-103	+344	+512	+56	-430	-404	-335	-357	-318	+125	+146	+262	+280	+52	+391	-129	-245	-215	-142	-75
28		+34	-1247	+391	+56	-555	+146	+297	+636	+585	-155	-486	-688	-538	-533	-77	+194	-17	..	..	..	..	..	..	..	..
29		..	..	..	..	..	..	..	..	+181	-129	-383	-516	..	..	..	..	-108	-77	+64	+77	+150	+43	+189	-232	..
30		-103	-404	+168	-181	-357	+236	+224	+258	+99	-116	-512	-408	-310	-219	-116	+305	-138	-13	-13	-206	-133	-159	-34	-52	-91
31		-90	-34	-198	-314	+344	-525	+439	+163	+155	-185	-258	-318	-297	-95	+60	+206	+344	-185	-163	-129	-43	-9	-52	-69	-52
MEANS		-127	-140	-75	-61	+7	+27	+223	+355	+169	-234	-501	-550	-423	-238	-56	+49	+92	+84	-5	-58	-11	-42	-63	-143	-72
ALL DAYS																										
MEANS		-61	-116	-117	-20	+21	+43	+201	+390	+196	-291	-554	-556	-387	-215	-46	+46	+49	+48	-38	-62	-39	+3	-38	-141	-70
10 DAYS																										

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1934

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

AUGUST 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-444	+115	-41	-92	-15	+83	+89	+178	+281	+118	-68	-219	-192	-145	-207	-115	+118	+296	+142	+33	+56	-44	-136	-101	-13
2		-38	-364	+89	-9	-21	-71	-38	+222	+311	-95	-249	-308	-240	-30	+83	+118	+101	+101	+77	-314	+53	-311	+429	-71	-24
3		-133	-145	-101	-181	-450	-21	+290	+358	+314	+86	+198	-444	-391	-74	+213	+47	+110	+113	-124	-148	+104	-53	-83	+240	-11
4		-521	+59	-18	+36	+12	-50	-80	+186	0	-86	-225	-207	-426	+110	+92	+275	+474	+210	+115	-255	+216	-497	-195	-231	-42
5	X	-95	-118	-115	-118	+24	-30	+95	+207	+89	-154	-192	-302	-216	-77	-33	+181	+124	-80	-27	-216	+95	-83	-118	-181	-56
6		-178	-225	+432	+56	-9	-6	+47	+59	-80	-172	-269	-263	-139	-65	+21	+181	+92	+107	+24	-30	..	..	..	..	..
7		..	..	..	..	..	..	..	..	+278	+112	-160	-145	-98	-258	-148	+15	+18	-47	-157	-110	-142	-118	-56	-53	..
8	X	-9	+36	-207	+50	+71	-36	0	+207	+133	+30	-181	-237	-89	-15	+213	+36	+74	+59	-6	-56	-24	-62	-65	-24	-10
9	X	-86	-53	-38	-36	0	-38	+12	+296	+287	0	-240	-358	-266	-213	-133	-53	+112	+148	+104	-24	+118	+290	-92	-471	-31
10		+6	-62	-86	-68	-50	-33	+53	+89	-24	-243	-320	-255	-95	-121	-166	+36	+36	+74	+139	+468	+89	-219	-104	+127	-30
11		-9	-24	-83	+27	+50	-6	+89	+352	+385	+210	-352	-524	-355	-30	+89	-6	+6	-44	-163	-89	-44	+12	-15	-27	-23
12		-27	-62	-89	-95	-24	-56	+95	+246	+124	-367	-423	-110	-15	-18	+477	+406	+654	+453	+71	-112	+47	-133	..	..	..
13		..	..	..	..	..	..	..	+163	+148	-107	-172	-151	-157	+115	+311	..	..	..	..	..	..	..	..	..	..
14		..	..	..	..	..	+95	..	+249	+95	-98	-101	-148	-266	+121	+71	-92	+115	+30	-36	-80	-21	-44	+41	-145	..
15	X	+178	-27	-30	-65	-33	-27	+36	+213	+317	-15	-207	-252	-30	-166	-44	-36	+296	+160	+30	-124	-74	-15	-47	-30	0
16	X	-59	-59	-62	-71	-86	+18	-9	+255	+154	-115	-210	-192	-178	-59	+77	-160	+47	+332	0	+154	+133	+101	-30	+83	+3
17		+30	-115	-89	-95	-184	-118	-62	-80	-346	-36	-89	-192	-151	+50	+391	-406	+210	+38	+136	+169	+53	-145	-148	+9	-49
18		-9	+77	-71	-47	+24	-53	+6	+145	+207	+110	-83	-189	-477	-349	-213	+24	-62	+485	+89	-6	+92	+181	+74	-30	-3
19	X	-130	-195	-201	-246	-124	-163	+178	+559	+406	-509	-411	-154	+118	+278	+258	+44	+36	-86	-104	-44	-24	-36	-30	-24	-25
20	X	-27	-130	-38	-6	-24	+86	+118	+204	+12	-263	-358	-477	+27	+237	+157	+92	0	-65	-92	-112	-15	+130	+302	+278	+2
21	X	-68	-210	-272	-118	+30	-38	-38	-21	-59	-204	-133	-59	-115	-56	+24	+47	+121	+89	-86	+18	-30	-36	+36	-607	-74
22		+503	+47	-83	+178	-71	+98	+110	+471	-74	-36	-104	-201	+62	-53	-59	-62	-86	+9	0	-9	-18	-12	-56	-65	+20
23		-62	+12	-18	-36	+18	+12	+133	+329	+216	-121	-95	-263	0	-263	-80	+110	-101	-104	-12	+30	+50	-53	-56	+33	-13
24	X	-56	-139	+30	-44	-15	+62	+201	+453	+323	+59	-204	-450	-414	-323	-77	0	+71	+92	-6	-98	-24	+9	+30	0	-22
25	X	-27	-15	-18	-6	+12	-9	+59	+290	+346	+216	-12	-272	-255	-346	-343	-145	+121	+266	+62	-124	+62	-30	-192	-163	-22
26		-148	-107	-80	-56	+12	-41	+299	+275	+118	+201	+24	-62	-89	-118	+474	-317	-89	+71	+121	+542	-192	-101	+308	-358	+29
27		-314	-477	-151	-101	+80	-68	+118	+326	+213	-311	-151	+38	+65	-228	+252	+133	-118	+127	+166	+311	-145	-59	-592	+130	-31
28		+219	-725	+222	+24	-184	-115	+151	+379	+459	-15	-59	-373	-299	-370	-50	+74	-329	..	..	..	..	..	..	..	..
29		..	..	..	..	..	..	..	..	+112	+65	-95	-263	-326	..	..	..	-210	+38	+92	-124	+121	+145	+65	..	..
30		-65	-361	+275	-33	-178	-47	+225	+115	+240	+33	-86	-83	-95	-83	-74	+130	-181	-36	-6	-213	-107	-83	+30	-50	-31
31		-124	0	-12	-332	+337	-388	+181	+95	+151	+9	-30	-62	-89	+27	+163	+302	+438	-314	-201	-74	-12	+86	-27	-95	+1
MEANS ALL DAYS		-71	-94	-59	-61	-24	-37	+86	+238	+167	-46	-157	-238	-162	-85	+44	+11	+71	+81	+15	-8	+17	-43	-32	-68	-19
MEANS 10 DAYS		-38	-91	-95	-66	-15	-18	+65	+266	+201	-96	-215	-275	-142	-74	+10	+1	+85	+92	-12	-63	+22	+27	-21	-114	-24

* = 10 LEAST DISTURBED DAYS

TABLE 119
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1934
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
SEPTEMBER 1934

DAY	*	COMPONENT NORTHERLY										LINE		OM		LENGTH IN KMS										56.8 DIRECTION										N 19° 5' E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																			
1		-344	+206	-198	-64	+138	+241	-163	+301	+224	-262	-482	-507	-297	-181	-64																		
2		-52	-90	-95	-159	+64	+22	-602	-129	-219	-52	-112	-99																		
3		+538	+280	-181	-533	-387	-430																		
4		+357	+108	-181	-374	-542	-469	-344	-340																		
5		..	..	..	..	+86	+90	+344	+439	+267	-56	-520	-559	-520	-430	-103	+64	+34	-43	-185	-116	-77	-99	-108	-129	..															
6		-112	-77	-245	+129	+194	+39	+288	+430	+275	-215	-744	-624	-344	-43	-9	+52	+138	+322	+133	+108	-99	-125	-335	-241	-46																			
7		-90	-125	-64	-22	-39	+17	+314	+310	+86	-477	-516	-559	-525	-340	-90	+163	..	..	..	..	..	..	..	..	..										
8		..	..	..	..	..	..	..	+580	+181	-585	-654	-611	-494	+39	+47	+82	+86	-9	-129	-77	+22	-86	-90	-129	..												
9	X	-43	-95	-116	-64	0	+22	+430	+516	+22	-611	-641	-774	-572	-335	+22	+133	+129	+17	-138	-52	-17	+82	-86	-125	-96																			
10	X	-108	-138	-150	-43	+43	+9	+318	+387	+39	-301	-430	-559	-439	-280	+30	+90	+47	-90	-69	-56	-82	-95	-43	0	-80																			
11	X	-34	-142	-202	-52	-90	+52	+301	+215	+56	-176	-387	-421	-611	+9	-301	-112	-17	+129	0	+47	+129	+86	+22	-396	-79																			
12	X	-469	+112	+77	-236	+56	+73	+224	+176	-163	-348	-353	-469	-301	-146	-133	+26	+73	-22	-86	-86	-52	-43	-125	-125	-98																			
13	X	-129	-129	-103	-108	-52	+34	+322	+344	+133	-254	-529	-538	-477	-262	-56	+64	-43	-159	-86	-69	-52	-86	-47	-129	-100																			
14	X	-159	-34	-90	-82	-64	-95	+69	+344	+228	-168	-477	-585	-525	-340	-95	-9	+86	-39	-77	-13	-82	-34	-39	-56	-97																			
15	X	-125	-52	-64	-168	-86	-43	+211	+301	+13	-391	-632	-598	-413	-258	-9	+17	-69	-138	-215	+155	+219	+275	-146	-267	-103																			
16	X	-249	+52	-56	0	-452	+64	+129	+172	+176	-47	-430	-460	-47	+22	-108	-43	-9	+43	+129	-232	-301	-262	-168	-120	-92																			
17		+82	+215	-189	-439	+482	-26	-26	+120	+318	-86	-150	-232	-280	-206	-150	-86	-77	-95	-150	-103	-34	-82	0	-99	-54																			
18	X	-133	-103	-108	-146	+125	-86	+129	+125	+52	-90	-366	-512	-387	-211	-9	+34	-13	-224	-86	-159	-120	-138	-103	-129	-111																			
19		-39	-129	-77	-99	-56	-69	+52	+82	-9	-232	-731	-310	-327	-133	+215	+503	+112	+90	-142	-378	-172	-159	-47	+150	-79																			
20		-456	+434	+103	-168	-116	-86	+129	+163	-34	-654	-430	-452	-258	-82	+103	+108	+43	-198	-254	-125	-103	-13	-168	-133	-110																			
21		-125	-125	-86	-60	-39	-47	+189	+292	+26	-176	-456	-576	-245	+86	+267	+464	+366	+305	+838	-224	-168	-215	-284	-258	-10																			
22		-172	-116	-77	-34	-194	+133	+292	+258	+142	-275	-396	-168	-206	0	+301	+176	+172	-9	+185	+516	+546	+710	+710	+533	+226																			
23		..	..	..	..	..	..	..	..	..	..	..	..	..	-103	+82	+138	+56	-34	-43	+39	+129	-17	+245	+280	..						
24		+284	-198	+172	-589	+224	-482	+469	+202	+254	+69	-413	-366	-69	-189	-150	+929	+176	-176	+215	+129	+133	1036	+499	-82	0																			
25		-327	..	..	..	..	..	..	-108	-77	+185	+258	+387	-765	-245	-215	-172	-108	-52	-22	-189	-99	-125	-172	-95	..													
26		-77	..	..	..	..	..	..	+249	+194	-77	-258	-211	-482	-198	-95	+146	-64	+69	+9	-39	-181	+236	-129	..	..																	
27		+39	+408	+90	-318	+34	-348	-387	-138	-95	-52	-9	+17	+108	-146	-95	-43	-73	-22	..																		
28		-383	-52	+60	+34	-563	-95	+116	+258	+86	-73	-318	-69	-211	-172	+77	+69	-17	+43	-26	+43	-77	-52	-39	-34	-58																			
29	X	-77	-189	-90	-95	+9	+64	+77	+219	+108	-301	-348	-254	-194	-52	+64	+103	-9	+43	+108	+181	+73	-211	-17	-568	-56																			
30		+163	+77	-168	-86	-34	-507	+26	+241	+34	-219	-172	+236	-129	-73	+90	-64	-215	-90	-43	-73	+73	+86	-34	-215	-46																			
MEANS ALL DAYS		-120	-36	-74	-121	-32	-55	+197	+255	+92	-239	-443	-407	-318	-140	+8	+129	+46	+13	+12	-21	-10	-69	-24	-121	-63																			
MEANS 10 DAYS		-153	-72	-90	-99	-51	+9	+221	+280	+66	-269	-460	-517	-397	-185	-60	+30	+18	-44	-52	-28	-28	-43	-75	-192	-91																			

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-500	+151	-27	-47	-24	+154	-18	+219	+222	+41	-130	-266	-95	+33	+130	+172	-136	-74	-12	+361	+192	-542	+178	+370	+15						
2		-207	-477	+36	-30	-36	-53	+219	+154	-30	-352	-77	-210	+133	+186	+151	+184	+314	+906	-163	-376	-160	-192	-133	-92	-13						
3		+74	-373	-480	-30	+302	+151	+104	+337	+391	+124	-148	-154	-299	-139	+53	+172	-80	-92	-127	-139	-269	+33	-53	-18	-28						
4		-50	-15	-139	-80	-44	+311	+198	+281	+184	+83	+213	-219	-314	-222	-408	-50	-175	+59	+56	+12	+6	-50	-118	+24	-19						
5		-110	-44	-30	-83	+24	+62	+115	+296	+284	+207	-59	-130	-228	-287	-95	-24	-47	-86	-101	-59	-24	-30	-36	-71	-23						
6		-83	-30	-213	+68	+148	-47	+83	+349	+400	+417	-302	-284	-148	+163	+151	+68	+77	+181	+219	-151	+74	-71	-255	-189	+26						
7		-89	-92	-59	-101	-30	-56	+142	+266	+166	-59	-6	-163	-323	-326	-213	-36	+21	+281	-6	-27	-62	-30	-30	-56	-37						
8		-115	-139	-89	-86	-59	-50	+201	+474	+266	-148	-154	-311	-302	+130	+30	-30	-27	0	-56	-24	+21	+9	+27	-33	-19						
9	X	0	-59	-86	-56	0	0	+281	+554	+104	-290	-228	-423	-302	-201	-71	-47	+18	+24	-24	+30	+71	+59	+59	-47	-27						
10	X	-59	-107	-124	-33	+30	-9	+157	+266	+148	-36	-101	-234	-178	-139	+53	+53	+6	-95	-71	-62	-36	+21	+24	+133	-16						
11	X	+77	-110	-192	-89	-115	-47	+86	+151	+175	+59	-47	-80	-302	+136	-376	-148	+24	+207	+80	+104	+260	+204	-38	-207	-8						
12	X	-320	+86	+53	-115	-30	-30	+101	+219	-56	-92	-41	-136	-30	+15	-169	-59	-41	0	+12	-33	-12	+65	-33	-24	-28						
13	X	-36	-47	-30	-53	-30	+24	+184	+296	+222	+18	-160	-181	-210	-148	-27	+24	-55	-65	-65	-33	-30	+15	+18	0	-17						
14	X	-71	+41	-24	-27	-24	-56	+53	+263	+255	+104	-118	-243	-231	-204	-133	-110	-41	-36	+33	+18	-36	+24	+27	+24	-21						
15	X	-50	-24	-33	-62	-59	-30	+74	+243	+118	-101	-272	-266	-189	-154	-27	-12	-71	-65	-133	+184	+420	+222	-65	-151	-21						
16	X	-160	+83	-36	+53	-178	-192	+83	+346	+340	+130	-189	-178	+115	+65	-133	-98	+53	+332	+367	-163	-382	-290	-95	-89	-9						
17		+65	+311	-266	-320	+184	+266	+231	+278	+429	+30	+59	-24	-74	-130	-207	-151	-27	+27	-30	-24	+12	-12	+98	-6	+30						
18	X	-89	-59	-92	-95	+83	0	+92	+213	+181	+44	-207	-332	-280	-178	+27	+71	+59	-71	+33	-59	-41	-56	-36	-89	-36						
19		+15	-86	-30	-59	-18	-44	+65	+266	+145	+210	-352	-340	-400	-213	+231	+628	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	..	+278	+222	-258	-225	-302	-204	-83	+27	+112	+89	-47	-133	-59	-6	-107	-77	-62	..
21		-65	-86	-59	-27	+18	-30	+148	+326	+151	+24	-299	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	+290	+260	-41	-269	-201	-142	-53	+130	-38	+27	0	+104	+314	+385	+592	+518	+444	..
23		+391	+272	+252	+89	+59	+47	+237	+429	+133	+6	-92	-222	-284	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	+192	+178	-47	-38	+30	-148	-278	+1018	+68	-358	+89	-110	+477	-639	+808	+95	..
25		-68	-207	+252	-358	-773	-166	+559	+136	+47	+533	+669	+684	-406	-329	-539	-477	-296	-178	+74	-255	-95	-101	-154	-44	-62						
26		-15	+6	-53	+47	-222	+175	+89	+142	+340	+115	+36	+133	-237	-154	+74	-157	-237	-47	+86	-178	-33	-44	+320	-56	+10						
27		-545	+207	+110	+27	-62	+27	-56	+625	+471	-151	+243	-74	-145	-252	-263	-41	-210	-18	+56	-86	-59	-6	-30	+6	-9						
28		-234	-53	+36	-80	-104	-65	+154	+290	+178	+104	-24	+41	-249	-201	-74	-80	-89	-44	-33	0	-62	-89	+36	0	-27						
29	X	-59	-151	-89	-80	-18	+6	+181	+255	+154	-127	-148	-36	-44	-24	+127	+192	-6	-9	+121	+148	+53	-192	-92	-503	-14						
30		+154	+101	-115	-104	-47	-136	-53	+198	+50	-115	-47	-545	+266	-36	-56	-142	-296	-110	-62	-89	-36	-121	-349	-237	-80						
MEANS ALL DAYS		-104	-42	-70	-72	-45	+10	+136	+285	+210	+22	-52	-151	-169	-100	-84	-30	-53	+43	+11	-38	-10	-50	-30	-56	-18						
MEANS 10 DAYS		-77	-35	-65	-56	-34	-33	+129	+281	+164	-29	-151	-211	-163	-83	-73	-13	-6	+22	+35	+13	+27	+4	-23	-95	-20						

* = 10 LEAST DISTURBED DAYS

TABLE 121
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1934
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
OCTOBER 1934
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN	
1		+108	-35	-39	-169	-134	-186	+48	+87	+87	-52	-126	-260	-126	+69	..	..	..	..	..	..	..	..	..	..	..
2		..	..	..	..	-22	-17	+216	+65	+260	+385	+9	-95	-255	-433	-346	-225	-178	-87	-134	-91	-65	-69	-17	-126	..
3	X	-139	-121	-152	-325	+156	+22	+208	+221	+416	+173	-91	-268	-433	-368	-178	-108	-35	+26	-82	-87	+35	+78	-212	+56	-50	
4		-43	-95	-117	-43	-26	-281	-117	+277	-82	-95	-307	-169	-43	-39	+74	+87	..	..	..	..	..	..	..	..	..
5		..	..	..	..	..	..	..	+277	+242	-26	-524	-745	-524	-199	-74	+65	+78	0	-43	-30	-43	-56	-91	-208	..
6		-139	-69	-156	0	-35	+9	+346	+238	+95	-355	-476	-528	-498	-329	+69	+147	+39	0	-9	-9	-65	-87	-160	-182	-90	
7		-130	0	-52	-30	0	+39	+303	+95	+74	-69	-792	-593	..	..	..	..	..	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	+303	+234	-95	-572	-455	-268	-113	-56	+13	+39	-121	-61	-9	-52	-69	-121	-117	..
9	X	-173	-229	-26	-61	-52	+9	+113	+472	+173	-173	-446	-572	-476	-182	+9	+52	0	-52	-22	-9	-43	-104	-87	-95	-82	
10	X	-173	-182	-91	-22	-52	-43	+130	+260	+264	-43	-520	-736	-567	-286	-61	+61	+130	+17	0	-17	-39	-87	-87	-134	-95	
11	X	-117	-139	-78	-61	-82	-35	+130	+303	+338	-52	-567	-684	-442	-182	-48	-30	-95	-139	+91	+381	-52	-87	-126	-139	-80	
12		-65	-35	-255	+22	-43	-152	+126	+173	+152	-56	-377	-559	-294	-208	-95	+260	+108	+87	+13	-30	+442	-52	-260	-191	-54	
13		-238	-294	-30	-108	-216	-26	-48	+303	+303	-139	-165	-260	-455	-264	-95	-48	+65	-221	-65	-9	-39	+52	-126	+78	-95	
14	X	-95	-191	+173	-216	-121	-74	0	+108	+195	+43	-182	-351	-468	-316	-216	-87	-65	-117	-52	+43	+52	-35	+22	-69	-84	
15		-697	+82	-9	-186	-61	-104	-35	+485	+121	-628	-35	-455	0	0	-312	0	-87	-48	0	-9	-43	-95	-104	-104	-97	
16		-121	-152	-35	+30	-225	-95	0	+87	+43	+17	-264	-286	-204	-48	-9	-61	-126	+22	0	-39	0	-39	-130	-264	-79	
17	X	-130	-82	-95	-225	-48	-87	0	+204	+277	+13	-255	-455	-299	-35	-74	-173	-87	-35	+264	-82	-173	-91	-130	-169	-82	
18	X	-134	-95	-204	-30	-134	-61	-48	+191	+195	-35	-338	-481	-346	-169	-78	-43	-52	-91	-56	-52	-56	-69	-87	-91	-98	
19	X	-113	-91	-52	-52	-43	-39	0	+216	+121	-113	-312	-502	-303	-130	+9	-35	-91	-104	-52	-52	-95	-43	-182	-139	-92	
20		-121	-74	-91	-165	-48	-147	+87	+173	+169	-104	-368	-338	-338	-91	+255	+43	+26	+104	+134	0	-9	-87	-195	-329	-63	
21		-281	-130	-152	-126	0	-43	-48	+82	0	-195	-455	-182	-225	+17	+87	+43	0	-39	+9	+281	-22	-104	-264	-238	-83	
22		-78	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		-602	-100	-727	+563	+260	+78	-69	+56	+372	+580	+113	-35	+126	+225	+242	+156	+178	+216	+216	+307	+139	+277	+290	+100	+52	+117
25		-82	-299	-303	+87	+17	+121	+195	+342	+520	+537	+43	-286	-48	+9	-35	+48	+182	+260	+385	+173	+160	-160	+221	+303	+100	
26		-195	-65	-225	-152	-126	+52	+585	+43	+476	+485	+22	-169	-82	-130	-87	0	0	+130	+251	+87	-108	+139	+74	-242	+32	
27		+35	+52	-48	-359	+95	-693	-104	+654	+338	+39	-156	-160	-78	-48	+52	+108	-43	+9	+35	+130	+312	+91	+35	-28	+11	
28	X	-121	-126	-104	-61	-48	-43	-9	+56	+30	+169	-121	-87	-9	0	+26	+26	0	+39	+134	+104	-9	+9	+30	-130	-10	
29		-56	+43	-48	0	-13	-43	+52	+234	+242	-13	-216	-238	-182	-82	+65	..	..	..	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	+368	+221	+108	-26	+17	+186	+242	+251	+134	+26	+61	+182	+216	+173	+139	+87	+100	..
31	X	+91	+69	+117	+78	-35	+169	+225	+325	+87	-165	-169	-225	-104	+43	+121	+74	-35	-30	+43	+22	-9	-9	-9	-35	+27	
MEANS	ALL DAYS	-172	-108	-121	-65	-40	-56	+85	+238	+223	0	-244	-363	-264	-119	-20	+21	+1	+2	+63	+46	+25	-23	-80	-99	-45	
MEANS	10 DAYS	-110	-119	-51	-98	-46	-18	+75	+236	+210	-18	-300	-436	-345	-162	-49	-26	-33	-49	+27	+25	-39	-44	-87	-94	-65	

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1934

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

OCTOBER 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+245	+84	-6	-135	-93	-81	-30	+9	+114	+57	-48	-48	..	..	..	..	..	..	..	..	..	..	-36	-69	..
2		-218	+93	-42	-135	+12	-27	+78	+12	+96	+93	-63	-141	-224	-209	-123	-81	-72	-63	-66	-57	-60	-57	-30	-72	-57
3	X	-78	-60	-135	-155	+57	+6	+72	+75	+132	+9	-155	-266	-239	-155	-54	-27	-30	-33	-33	-33	-27	+27	-75	-57	-56
4		-51	-48	-36	-6	-21	-120	-15	+30	-167	-113	-230	-120	-12	0	+39	+90	..	..	..	..	..	..	..	..	..
5		..	..	..	..	..	..	..	+215	+320	+167	-117	-419	-344	-161	-147	-63	-33	+33	-9	+6	+6	-9	-33	-188	..
6		-72	-36	-164	-78	-93	-60	+206	+185	+161	-60	-111	-248	-395	-392	+45	+33	-57	+90	+12	+15	+24	+6	-93	-126	-50
7		-117	+33	-33	-27	+30	+155	+248	+299	+311	-371	-365	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	+299	+287	-18	-296	-209	-96	-96	-96	-24	+42	-36	-30	+27	+21	-6	-36	-24	..
9	X	-152	-138	+6	-36	-30	+33	+84	+419	+269	+33	-150	-248	-305	-194	-48	-9	+15	-21	-9	+18	+18	-12	-6	+21	-18
10	X	-87	-150	-42	+27	-45	-33	+57	+239	+302	+78	-284	-365	-341	-185	-117	-39	+114	+106	+30	0	+24	-30	-33	-69	-35
11	X	-60	-36	-33	-33	-30	0	+90	+275	+314	+84	-239	-284	-170	-120	-102	-102	-147	-96	+170	+484	+30	-30	-39	-48	-8
12		+15	-27	-218	+72	+30	-147	+30	+75	+150	+93	-42	-257	-75	-60	-138	+272	+108	+78	-152	+27	+182	+150	-138	-117	-4
13		-200	-233	-6	-57	-114	-15	-27	+185	+302	+87	+30	+164	-209	-161	-36	-9	0	-227	-90	-21	+60	+90	-236	+194	-22
14	X	+6	-144	+84	-93	+33	-30	0	+15	+197	+150	+33	-72	-150	-147	-147	-96	-126	-123	-45	+72	+90	+57	+117	-87	-17
15		-556	+78	+30	-123	-36	-90	+24	+191	+434	-374	+42	-221	+227	+245	-161	+45	-126	-123	-6	+30	+24	-27	-54	-60	-24
16		-36	-117	+93	+96	-269	-18	+60	+75	+120	+150	-57	-63	-60	-30	+33	+24	-48	+51	+33	+12	+54	+57	-164	-138	-6
17	X	-51	-30	-69	-164	-42	-36	0	+126	+236	+90	-30	-185	-81	+120	+15	-161	-120	-27	+275	0	-90	-36	-72	-114	-19
18	X	-92	-51	-167	0	-84	+6	0	+147	+182	+105	-87	-239	-233	-152	-105	-75	-51	-42	-27	-6	0	0	-21	-42	-43
19	X	-60	-60	-18	-21	+9	+33	+39	+209	+206	+84	-69	-239	-120	-102	-60	-60	-78	-117	-36	-27	-27	+12	-48	-48	-25
20		-57	-36	-57	-144	-33	-12	+72	+167	+120	+36	-33	-33	-75	+48	+341	-105	+102	+93	+12	+90	+45	0	-105	-239	+8
21		-200	-90	-120	-152	+42	-33	-21	+87	+33	-51	-242	-15	-132	+90	+126	+48	+72	+21	+63	+239	+191	+33	-305	-111	-18
22		-21	-257	-24	-45	-194	-155	+57	+179	+120	-12	-66	-236	-212	-123	-30	+45	+60	+96	+114	+36	0	-57	-114	-129	-40
23		-114	-117	-0	-51	-33	+12	+117	+135	+254	+266	-123	-215	-227	-155	-284	-126	+117	+227	-30	0	+380	+822	+706	-553	+38
24		-673	-460	-646	+371	+248	-51	-72	+209	-30	+233	+48	0	+21	+78	-30	-200	-93	-93	+63	+42	+96	-78	-48	+18	-49
25		-135	-320	-30	+27	-152	-84	+36	+209	+401	+598	+105	-111	-233	-161	-188	-123	-54	+27	+48	+132	+30	-341	+141	+152	-1
26		-155	-126	-191	-120	-209	-12	+448	-105	+266	+365	+362	-30	-6	-179	-209	-173	-120	+24	+9	-21	-170	+141	-51	-170	-18
27		+24	-51	-21	-335	-36	+24	-54	+344	+194	+176	-24	-96	-6	-42	+30	+63	-150	-152	-60	+90	+102	+176	+48	+54	+8
28	X	-150	-150	-126	-105	-90	-87	-120	+75	-33	+9	-120	-33	+66	+45	+9	-36	-63	-36	+57	+36	0	+9	+33	-63	-36
29		-120	+6	-93	-51	-39	-30	-39	+144	+167	+18	-90	-126	-152	-84	-30	+39	-30	-9	-90	+78	+30	+6	+39	-60	-28
30		-6	+27	-66	-87	-93	-39	-30	+135	-9	-33	-117	-30	+51	+87	+42	-36	-152	-129	+27	+78	+6	0	-24	-21	-17
31	X	-6	0	-24	-33	-117	+6	+72	+152	+42	-57	-66	-245	-147	-21	+18	+9	-63	-63	-39	-27	-30	-18	-21	-24	-29
MEANS ALL DAYS		-125	-98	-83	-55	-50	-32	+45	+152	+178	+83	-60	-147	-132	-75	-46	-34	-38	-21	+4	+44	+38	+35	-23	-78	-22
MEANS 10 DAYS		-73	-88	-52	-61	-34	-10	+29	+173	+185	+58	-117	-218	-172	-91	-59	-60	-55	-45	+34	+52	-1	-2	-16	-53	-28

* = 10 LEAST DISTURBED DAYS

TABLE 123

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-43	-39	-35	-30	0	+60	+173	+190	+125	-9	-186	-302	-216	-164	-99	+35	+52	+86	+143	-39	-13	-17	-9	-43	-16
2	X	-95	-35	+9	+26	+39	+17	+112	+298	+199	-212	-181	-130	-121	-56	-9	-9	-30	-35	0	0	+43	+17	-43	-65	-11
3		-125	-52	+43	-26	+39	+86	+138	+177	-52	-259	-302	-220	-151	+121	+13	-9	+69	+65	-13	+43	-56	-56	-130	-95	-20
4		-82	-43	-43	-35	-35	-43	+9	+73	+69	-78	-199	-181	-216	-108	+60	+13	+17	+26	-9	-30	+4	-35	-56	-104	-43
5		-117	-177	-9	0	0	+91	0	+173	+91	-48	-225	-376	-415	-177	+125	+138	+229	+216	+13	+52	-13	-86	-95	-91	-29
6		-86	-117	-39	+48	-35	+60	+203	+389	+138	-194	-441	-518	-294	-43	+17	-9	+43	+43	-9	+48	+276	-35	-130	0	-29
7		-233	-294	-130	-285	+380	+95	+177	+259	+39	-216	-436	-367	-13	+108	+69	+346	+721	-99	+99	+130	+238	-311	+52	-238	+4
8		-341	-233	-324	-242	-147	+302	+276	+233	+324	-52	-315	-216	-255	-173	-30	+199	-13	0	+315	+130	+264	+302	+276	-138	+6
9		-544	-276	+73	-143	-39	-86	+78	+108	+121	+60	-316	-328	-324	-130	-121	+9	+134	+52	+112	+52	+17	-48	-194	-65	-71
10		-39	-130	-121	-117	-82	+22	+43	+82	+86	+82	-13	-190	-307	-225	-134	-86	-43	+86	+13	0	-9	+9	-39	-43	-48
11	X	-212	-60	-125	-43	-112	-22	-35	0	+307	+95	-39	-341	-397	-225	-134	-48	+9	+78	+86	+26	+9	-43	-43	-56	-55
12	X	-108	-190	-138	-17	-48	-60	+22	+268	+259	+52	-207	-285	-350	-302	-177	-121	-86	-43	-9	0	0	0	-43	-52	-68
13		-82	-121	-91	-104	-78	-216	-86	+268	+216	+147	-22	-86	-229	-173	+9	-26	+43	+78	+134	+168	+86	+216	-536	-91	-24
14	X	-264	-95	-164	-130	-168	-229	-86	+86	-9	+43	+78	-125	-216	-82	-86	-91	-108	-43	-43	-43	-91	-104	-86	-82	-89
15		-73	-78	-86	-160	+43	+17	-86	+151	+56	-86	-95	-86	-173	-173	-82	-43	-52	+43	-13	+43	0	-39	-112	-147	-51
16		-73	-337	+39	-69	-52	-86	-108	-65	-78	-86	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	+56	-48	+30	+168	+108	-52	-91	-203	0	+346	+86	+130	+242	-56	-78	-43	-26	..
19	X	-159	+39	-138	-35	-125	-69	0	-17	-52	-43	-143	-255	-268	-190	-246	-203	-233	-181	-86	-35	+13	-78	-86	-95	-112
20	X	-39	-52	0	-26	+43	+86	+121	+177	-35	+143	-26	-177	-216	-177	-117	-108	-39	-60	0	-22	-9	+13	-48	-125	-29
21		-112	-35	-56	-82	-104	-82	-52	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	0	-135	-174	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	+13	+69	+30	+17	..	..	..	-165	-87	+30	+26	-9	-17	-52	-61	-95	-195	..
24		-87	-174	-113	-82	-91	-48	-26	-291	+174	+35	+195	-191	-746	-217	-30	+87	+87	+217	+174	+156	-87	-26	-126	-217	-59
25		-169	-256	-69	-82	-464	-108	0	+17	+187	-35	-26	-139	-360	-182	-130	-108	0	+169	+230	-9	+43	+9	+17	-130	-66
26	X	-35	-82	-78	-43	-26	-91	-43	+35	+87	+9	-130	-152	-208	-217	-208	-91	+65	+78	+52	+26	-39	-69	-52	-78	-54
27	X	-139	-130	-100	-87	-87	-95	-43	+48	+56	+82	-52	-234	-265	-226	-217	-113	-22	-52	+35	+30	+9	+17	0	-182	-75
28		+65	-122	-78	-230	-169	-87	-87	+43	+43	0	-87	-334	-412	-108	+139	-43	-52	-48	+30	+17	-22	-30	-126	-39	-72
29	X	-43	0	-43	-78	-43	-26	-117	+87	+130	+30	-52	-343	-317	-299	-226	-130	-126	-9	+43	-43	-69	-87	-87	-81	-81
30		-87	-69	-108	-87	-95	-126	-91	-52	-39	0	-52	-243	-269	-82	-78	-69	-130	-43	-43	-9	0	-43	-195	-143	-90
MEANS ALL DAYS		-131	-116	-79	-84	-54	-20	+27	+117	+105	-19	-132	-242	-281	-146	-70	-20	+22	+26	+52	+29	+36	-23	-79	-100	-49
MEANS 10 DAYS		-114	-64	-81	-46	-53	-43	+10	+117	+107	+19	-94	-234	-257	-194	-152	-88	-52	-18	+22	-10	-15	-38	-50	-86	-59

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD										DIRECTION E 0°.5 N																
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	- 33	- 36	- 39	- 42	- 30	- 6	+ 66	+111	+ 93	+ 60	- 42	-152	- 90	-117	-123	- 66	- 27	+ 45	+120	-102	- 63	- 42	- 27	- 63	- 25
2	X	-138	- 66	- 57	- 33	- 30	- 90	0	+188	+105	-117	- 90	- 33	- 93	- 45	- 57	- 90	- 87	- 69	- 45	- 9	+ 60	+ 54	+ 30	- 87	- 33
3		- 90	- 51	+ 6	- 54	- 57	+ 24	+ 72	+197	+ 33	- 63	-144	-123	-147	+105	- 60	- 57	+ 96	+ 33	- 21	+ 48	+242	- 27	-135	-120	- 12
4		- 75	- 72	- 36	- 57	- 51	- 57	- 18	- 9	+ 54	+ 30	- 57	- 18	-111	- 63	+ 75	0	- 24	- 18	- 18	- 27	+ 21	- 6	- 45	- 75	- 27
5		-117	-194	- 78	- 57	- 45	+ 33	- 30	+108	+289	+ 96	+ 54	-182	-386	-212	+ 24	+105	+215	+197	- 30	+ 30	- 24	- 45	- 60	- 60	- 15
6		- 93	-126	- 66	- 21	- 57	+ 12	+ 99	+299	+176	- 48	-126	-239	-203	-105	- 90	- 96	- 51	0	- 18	+108	+203	+ 45	-111	+ 48	- 19
7		-152	-362	-227	-425	+ 66	+239	+206	+108	+203	+407	-338	- 96	+203	+ 75	-155	+233	+362	-167	+120	+ 57	+ 63	-329	+203	-141	+ 6
8		-182	-120	-179	- 93	-221	+ 90	+105	+ 81	+311	+185	-236	-182	-179	-135	- 18	+164	-150	- 99	+147	..	..	..	..	..	..
9		..	..	..	..	..	..	..	- 90	- 6	+ 60	- 45	-105	- 96	0	-120	0	+120	0	+ 39	+ 63	0	- 6	-173	- 51	..
10		+ 30	- 45	-108	-102	- 72	- 27	- 9	+ 84	+ 30	+123	+126	- 24	-117	- 90	- 96	-120	-126	0	- 33	- 24	0	+ 84	- 33	+ 39	- 21
11	X	- 60	- 6	- 63	+ 30	-147	- 24	- 15	- 87	+212	+194	+120	- 45	-147	- 90	- 66	- 63	- 36	+ 18	+ 36	+ 27	- 6	0	0	0	- 9
12	X	- 48	- 84	-117	- 30	- 48	- 66	- 45	+152	+206	+135	0	- 48	-147	- 66	-150	-155	-129	- 84	- 6	0	+ 30	+ 57	+ 12	+ 6	- 26
13		0	- 33	- 60	+ 6	- 33	-179	- 45	+ 54	+129	+260	+179	+138	- 15	- 51	+114	- 84	-102	0	+123	+185	+138	-108	-272	- 54	+ 12
14	X	-179	- 48	-120	- 96	-150	-144	-152	- 21	+ 60	+ 75	+257	+ 84	- 33	+ 30	- 57	- 90	-144	- 66	- 6	- 18	- 57	- 87	- 57	- 57	- 45
15		- 36	- 36	- 48	-150	- 9	+ 45	- 6	+105	+ 33	+ 33	+102	+ 90	- 69	- 96	- 30	- 54	- 69	0	- 45	+ 78	+ 30	+ 12	- 36	- 30	- 8
16		-111	-359	+ 36	- 57	- 54	- 42	-123	- 90	- 30	+ 54	+ 36	+ 39	- 6	- 54	- 36	+ 63	..	..	..	..	..	..	..	..	..
17		+152	+ 96	+ 72	+ 63	+ 72	+ 60	+ 90	+105	+ 90	+ 84	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		- 51	- 15	- 33	- 48	- 12	- 39	- 48	+ 12	- 24	+ 15	+ 93	+ 72	- 51	- 90	-108	- 6	+200	+ 39	+ 60	+ 99	- 12	- 45	- 27	- 12	- 1
19	X	- 99	+ 12	- 90	- 30	- 78	- 60	- 24	- 6	- 36	- 9	- 87	-155	-176	-120	-144	-123	-150	-120	- 60	- 30	0	- 45	- 48	- 63	- 73
20	X	- 15	- 33	- 9	- 24	+ 27	+ 54	+ 78	+120	- 9	+ 60	- 15	-105	-120	-114	- 84	- 66	- 30	- 30	- 6	- 18	0	+ 6	- 24	- 63	- 18
21		- 66	- 24	- 36	- 48	- 66	- 54	- 33	- 6	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	- 20	- 97	- 30	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	..	+ 80	+137	+147	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		- 27	-107	- 84	- 60	- 43	- 33	- 70	+187	+ 97	+210	+668	+354	-411	-130	-150	+ 7	+100	+157	+ 94	+204	- 27	+ 40	-207	- 90	+ 28
25		- 94	-164	- 70	- 50	-100	-210	-114	0	+ 67	+ 17	+174	+104	-174	-187	-234	-204	- 53	+134	+174	- 37	+ 40	+ 37	+ 50	-174	- 44
26	X	- 57	- 50	-107	- 67	- 84	-127	- 73	+ 17	+ 50	+ 70	+ 33	+ 67	- 37	-114	-200	-130	+ 47	+107	+ 37	+ 57	- 20	- 10	+ 33	- 13	- 24
27	X	- 70	- 73	- 97	-100	-100	-134	- 47	- 60	- 33	+ 70	+ 97	+ 17	-100	-164	-217	-187	- 80	+ 80	+ 40	- 7	+ 70	+100	+114	-120	- 42
28		+134	- 63	- 40	-104	-204	- 67	-120	- 57	0	+ 67	+ 84	-100	-134	+100	+137	-134	- 97	- 63	+ 33	+ 53	+ 20	+ 47	- 37	+ 67	- 20
29	X	+ 94	+ 27	0	- 40	- 67	0	- 33	- 97	+ 33	+107	+301	- 60	-100	-204	-261	-167	-167	+ 7	+ 33	- 13	- 47	- 53	- 57	- 43	- 34
30		- 43	- 63	- 73	- 67	- 73	-104	-104	-140	-134	0	+ 67	0	- 80	- 33	- 67	-137	-130	- 60	- 37	0	+ 40	+ 33	-187	- 87	- 62
MEANS ALL DAYS		- 53	- 73	- 70	- 70	- 61	- 42	- 19	+ 55	+ 71	+ 78	+ 63	- 20	-119	- 77	- 87	- 73	- 21	+ 6	+ 24	+ 29	+ 30	- 12	- 40	- 52	- 22
MEANS 10 DAYS		- 60	- 36	- 70	- 43	- 71	- 60	- 24	+ 32	+ 68	+ 64	+ 57	- 43	-104	-100	-136	-114	- 80	- 11	+ 14	- 11	- 3	- 2	- 2	- 50	- 33

* = 10 LEAST DISTURBED DAYS

TABLE 125

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LINE		OM		LENGTH IN KMS										56.8		DIRECTION										N 19° 5 E	
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN											
1		- 35	+169	-799	+282	- 9	0	- 39	-113	-299	+295	+100	+ 87	- 87	- 13	- 48	-117	-152	-126	-130	+ 52	+621	-460	-174	-208	- 50											
2		-208	- 87	-139	-135	-226	-104	-78	+17	+104	+ 56	0	-169	-260	-152	-152	-113	- 91	+ 9	- 82	- 87	+ 39	+365	- 39	-117	- 69											
3		-285	-369	-126	- 91	-117	-213	-217	-78	-161	- 87	+ 9	-130	-139	-178	-234	+512	+1393	+135	+1445	- 87	- 61	+386	-182	-2370	- 51											
4		+495	-174	-234	-269	-395	-347	-780	+378	- 69	+200	-161	-174	-104	- 17	+143	+ 87	- 95	- 35	+ 65	+269	+ 87	-161	- 69	-256	- 67											
5	X	-113	-365	-169	-208	-148	-126	- 43	- 87	+ 22	- 35	-139	-421	-226	-126	- 17	+ 82	+ 65	+ 39	+ 17	0	- 87	-126	- 82	-130	-101											
6		-130	-217	0	-152	-139	- 87	- 69	- 35	+ 39	- 82	- 87	-343	-434	-304	- 82	- 35	- 43	- 43	0	- 56	+ 9	+ 17	+304	-286	- 94											
7		-130	-269	-139	-512	+213	-152	+22	-130	-108	- 95	-122	-108	-260	-217	-135	-130	+ 50	+ 52	+ 52	+ 78	+ 56	+ 78	-135	-234	- 97											
8	X	-213	-304	- 82	- 48	-165	-100	-122	- 52	0	+ 39	+ 43	- 82	-260	-152	-126	- 13	- 9	0	+ 43	+ 17	- 26	-122	-139	-130	- 83											
9	X	-135	-139	-195	-148	-156	-174	+ 43	+ 17	+ 13	- 35	-122	-243	-130	- 48	- 26	- 69	+ 87	+ 22	+113	+ 87	+ 56	+ 52	+ 87	- 65	- 46											
10	X	- 82	- 82	-126	- 95	-113	- 74	- 39	+ 87	+ 65	+ 78	+ 13	-226	-221	-217	- 91	- 78	+ 52	+ 78	+ 43	+ 43	+ 17	+ 13	-100	-126	- 49											
11		- 95	- 87	-130	-369	-217	- 87	0	+ 82	+130	-169	+ 35	+ 78	-130	- 82	-104	- 82	+ 9	0	0	- 13	- 43	0	- 43	- 52	- 57											
12	X	- 52	-113	- 95	- 82	- 87	- 56	+ 82	- 17	-195	+ 26	+ 43	- 95	-191	-343	-252	- 95	- 43	- 17	+ 26	+ 82	+ 26	+139	+ 78	+ 9	- 51											
13	X	+ 35	- 65	- 61	- 56	- 69	0	- 95	+ 43	+ 87	+200	+226	- 22	-130	-174	-152	-265	- 91	- 26	- 39	- 91	- 48	- 78	- 87	- 95	- 44											
14		-139	- 69	- 43	- 52	-174	-226	-200	- 43	- 22	+ 95	+ 43	- 9	-182	-100	-299	-135	+ 87	- 65	+ 43	+130	+213	-100	- 22	-230	- 66											
15		- 87	-143	-126	- 35	-265	-130	-243	-156	- 13	+ 95	+217	-208	-156	-126	- 87	-113	- 52	- 82	+ 9	- 52	- 91	- 95	- 87	- 61	- 87											
16	X	-139	-100	- 87	- 43	-265	-226	-217	-130	0	+ 65	+ 30	-130	-234	-148	- 95	- 91	- 48	- 9	+ 43	- 86	-117	- 87	-122	-148	-103											
17	X	-278	-165	-195	-282	-260	- 22	-208	-139	+122	+130	+ 87	-195	-221	-174	- 78	+ 43	+ 26	- 9	+ 43	- 43	- 43	- 48	- 91	-122	- 92											
18		-221	-130	- 87	-152	-195	-178	-143	-126	-139	- 91	- 87	-182	-135	- 22	-169	- 52	+ 65	+139	+347	- 43	- 43	- 43	-130	-343	- 85											
19		-148	-260	-187	-152	- 95	- 82	+ 9	-104	+ 13	- 87	-156	-239	- 65	-122	- 65	-139	0	+ 95	+265	+156	- 87	-130	-122	-195	- 79											
20		-165	-126	-100	-122	- 91	- 78	-174	-130	- 13	+ 39	- 48	-312	-282	-169	-108	- 91	-104	- 91	+ 95	+122	-126	- 87	- 78	-130	- 99											
21		- 91	-226	+ 39	+291	-260	-299	-174	+ 43	- 39	+ 87	-208	-174	-234	-256	-273	- 43	+ 61	+122	+ 78	0	+ 22	+ 22	-321	- 56	- 79											
22		-226	-352	+ 26	+ 82	- 91	- 69	-108	- 52	+ 48	+148	+130	-122	-352	-443	-352	- 26	-165	+ 17	+100	- 35	- 43	- 52	- 39	- 78	- 86											
23		-139	-135	-122	- 87	- 56	- 91	- 78	+ 17	+260	+378	+ 78	-265	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	..	+265	+260	+ 48	-191	-499	-187	-213	-139	+122	+ 39	- 43	- 26	+143	+ 65	-239	-178	..			
26	X	-108	-169	- 52	-156	-234	- 39	-195	+152	+174	+221	+ 9	-282	-356	-477	-243	-122	+ 52	+ 78	- 22	+ 43	- 43	- 56	- 61	- 95	- 83											
27	X	-135	-130	-130	-135	-104	- 95	- 43	+247	+239	+187	+ 87	-434	-482	-391	-265	-135	+ 9	+104	- 9	- 26	- 26	+117	-278	- 82	- 80											
28		- 69	-130	-113	-260	-130	- 65	-174	- 95	+278	+135	+ 87	-299	-391	-356	-273	-130	+ 43	- 43	-139	-100	-135	- 26	- 26	- 43	-102											
29		- 52	- 48	-169	- 91	-117	-326	+ 91	+234	+304	+208	+651	-152	+668	-920	-482	-130	+282	+642	-256	- 22	+ 69	- 87	- 52	- 78	+ 7											
30		-200	-252	-182	-108	-178	-208	-499	+295	+694	+625	+434	-152	-252	-148	-100	- 95	- 56	+ 48	+ 35	+443	+139	-169	-139	- 91	- 5											
31		- 95	- 78	- 52	- 61	- 22	- 22	+ 69	+130	+226	+339	+234	-139	-356	-265	-412	-174	+ 65	+135	+174	+ 22	+ 91	-148	- 52	-295	- 29											
MEANS ALL DAYS		-110	-160	-134	-113	-147	-128	-127	+ 8	+ 54	+ 92	+ 48	-174	-200	-219	-163	- 62	+ 48	+ 42	+ 75	+ 29	+ 16	+ 29	- 79	-218	- 69											
MEANS 10 DAYS		-122	-163	-119	-125	-160	- 91	- 84	+ 12	+ 53	+ 88	+ 28	-213	-245	-225	-134	- 74	+ 10	+ 26	+ 9	+ 3	- 29	- 20	- 80	- 98	- 73											

= 10 LEAST DISTURBED DAYS

DECEMBER 1934

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1934

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+ 12	+205	-542	+ 42	- 48	+ 33	- 33	+271	-331	+169	+397	+373	+117	+117	+ 36	- 93	-211	-138	-120	+150	+ 33	- 9	- 48	-114	+ 11
2		-123	- 57	-126	- 87	-247	- 90	- 51	- 36	+ 30	+ 42	+181	+120	- 27	- 45	- 60	-108	- 48	+ 27	- 48	- 33	+150	+166	+129	+108	- 10
3		-144	-126	- 75	- 57	- 90	-105	-166	-129	- 78	- 90	+ 63	+ 45	+ 57	- 96	-262	+710	+1367	+563	+671	-223	- 54	+367	+ 12	+1367	+ 75
4		+373	+ 21	-135	-132	-247	-244	- 9	-370	-229	+ 84	- 54	-108	+ 15	+ 30	+178	+147	- 42	- 78	+ 66	+169	+ 54	- 18	-172	- 57	- 32
5	X	0	-178	- 45	-160	- 84	-187	- 84	-175	- 48	+ 54	+196	- 30	-158	-123	- 36	+ 33	+ 36	+ 30	+ 42	+ 30	0	- 18	+ 42	- 18	- 36
6		- 60	-126	+ 6	- 96	- 87	- 60	- 30	0	+ 45	- 24	+ 63	- 72	-226	-181	- 33	+ 30	- 57	- 87	+ 12	- 9	+129	+187	+355	- 63	- 16
7		- 15	-166	-117	-265	+ 60	-181	- 57	-169	-120	- 12	+ 87	+181	- 60	-150	-144	-150	- 45	+ 45	+ 63	+120	+172	+ 15	+ 18	-126	- 42
8	X	- 75	- 60	- 45	- 24	-126	- 30	- 75	- 48	+ 30	- 33	+ 96	+169	- 36	- 60	-108	- 30	- 36	- 36	+ 57	+ 81	+ 48	+ 30	+ 24	+ 27	- 11
9	X	- 30	- 45	- 90	- 78	- 93	-105	+ 33	- 6	+ 75	+ 18	- 9	- 21	- 27	- 30	- 54	-120	- 30	- 93	+ 78	+ 75	+ 84	+ 90	+102	+ 12	- 11
10	X	- 6	- 42	- 60	-111	-120	-114	- 78	+ 24	+ 33	+102	+175	- 24	- 91	-111	- 78	- 84	+ 3	0	+ 36	+ 63	+ 54	- 87	- 27	- 45	- 24
11		- 12	- 30	- 57	-376	-238	-157	- 6	+ 60	+187	- 30	+117	+157	+120	+ 75	- 30	- 72	+ 6	- 36	+ 30	0	+ 6	+ 63	0	0	- 9
12	X	- 24	- 78	- 45	- 27	- 63	0	+ 78	- 30	-229	- 27	+ 87	+123	+ 18	-150	-199	- 93	-114	- 36	+ 27	+ 60	0	0	- 9	- 18	- 31
13	X	- 30	+ 15	- 18	- 24	- 18	- 12	-108	- 30	0	+150	+217	+271	+141	+ 24	- 36	-262	-144	- 18	+ 15	+ 21	+ 51	+ 30	0	+ 15	+ 9
14		- 36	+ 27	- 30	- 42	- 93	-117	- 90	- 36	-169	+ 42	+144	+337	+154	+123	-241	-120	+ 99	- 30	- 30	+211	+301	-226	+144	-135	+ 8
15		- 30	- 75	- 15	- 12	-154	- 84	-169	- 84	- 75	+ 24	+205	+ 27	+ 78	- 24	- 36	- 93	- 30	- 60	+ 54	+ 6	- 27	+ 12	+ 24	+ 57	- 20
16	X	- 39	+ 45	+ 81	+ 87	+ 27	+ 45	+120	+126	+ 90	+ 87	+ 84	+114	- 27	- 54	- 36	- 33	- 33	- 24	+ 12	0	+ 18	+ 60	+ 33	+ 24	+ 34
17	X	0	+ 75	+ 90	+ 6	+ 48	+ 36	+ 12	+ 24	+ 72	+ 75	+154	+ 54	- 39	-150	- 72	+ 90	+ 63	0	0	+ 27	+ 63	+ 60	+ 36	0	+ 30
18		-108	- 27	0	-105	- 72	-114	- 72	- 84	-117	- 60	- 21	+ 12	+ 75	+126	+283	- 48	+ 60	+226	+458	+ 18	+ 90	+172	- 12	-111	+ 24
19		- 48	-147	- 90	-108	- 66	- 87	+ 21	-175	- 69	-123	-117	- 27	+117	..	..	..	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	..	- 90	- 45	+ 39	+150	- 30	- 78	-117	-120	- 66	-108	- 30	+196	+187	+ 30	+ 87	+ 87	- 6	..
21		+ 90	-141	+175	+196	- 33	-277	- 30	- 78	+ 72	+334	+ 54	+108	- 27	-256	-226	- 30	+ 30	+114	+114	+111	+ 96	+ 18	-181	+ 30	+ 11
22		-141	-229	+ 30	- 24	- 57	- 9	- 87	- 72	+ 75	+138	+253	+196	- 51	-292	-247	- 54	-166	+ 27	+166	- 6	+ 30	+ 36	+ 63	+ 18	- 17
23		- 30	- 63	- 63	- 63	- 30	- 30	- 60	- 30	+187	+301	+178	+ 12	-141	-217	-268	-178	- 96	+ 6	+ 9	- 60	0	0	+406	+ 18	- 9
24		- 87	- 24	- 12	-241	- 63	-126	- 90	- 66	+157	+181	+262	+120	-181	-190	+ 15	+ 15	+138	+ 99	+397	-120	+ 9	- 48	+ 12	+117	+ 11
25		- 24	-108	- 60	-214	- 30	- 45	-160	-120	- 60	+184	+367	+157	-111	- 6	-163	-238	+102	0	- 21	0	+154	- 9	-150	- 66	- 26
26	X	+ 9	- 63	0	- 63	-138	+123	-108	- 96	+ 60	+154	+166	+ 87	- 60	-244	-256	-169	- 15	+ 36	0	+ 90	- 30	0	+ 6	- 27	- 22
27	X	- 30	- 54	- 51	- 90	- 87	- 90	- 75	+ 66	+132	+226	+196	- 30	-193	-277	-220	-147	- 30	+ 93	- 9	0	+ 30	+ 66	- 42	0	- 26
28		+ 30	- 39	- 36	- 99	- 60	- 6	0	+ 60	+147	+181	+539	+187	+ 60	+ 93	+ 30	+ 78	+123	+123	+ 60	+117	+138	+301	+247	+349	+109
29		+244	+120	- 51	+175	+178	- 57	+135	+226	+286	+903	+180	+692	+345	-930	-572	+ 45	+183	+759	-515	- 78	-238	+ 36	+163	-331	+162
30		0	- 42	- 99	- 66	-172	- 66	-175	+ 90	+286	+436	+452	- 63	- 45	- 75	-129	-208	-138	+ 21	+ 30	+560	-199	+ 24	- 30	+ 54	+ 19
31		+ 24	+ 30	+ 45	0	+ 57	+ 15	+ 84	+ 12	+114	+199	+403	+105	+ 27	+ 84	-455	-376	-108	+ 66	+135	+ 30	+120	- 51	- 27	- 78	+ 18
MEANS ALL DAYS		- 9	- 43	- 46	- 67	- 72	- 72	- 47	- 24	+ 21	+131	+215	+114	+ 25	-103	-118	- 54	+ 30	+ 55	+ 96	+ 49	+ 44	+ 44	+ 39	- 61	+ 6
MEANS 0 DAYS		- 22	- 38	- 18	- 48	- 65	- 33	- 28	14	+ 22	+ 81	+136	+ 71	- 45	-118	-110	- 82	- 30	- 5	+ 26	+ 45	+ 32	+ 23	+ 16	- 6	- 9

* = 10 LEAST DISTURBED DAYS

TABLE 127

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 19° 5' E											
LINE OM		56.8										56.8										56.8									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		-274	-570	+513	+57	-104	-83	-57	+196	+261	+222	+65	-135	-413	-326	-265	-104	+87	+74	+117	+139	+178	-304	-287	-178	-50					
2		-104	-87	-744	+313	+65	-126	-100	+44	+161	+87	-70	-26	-44	-300	-313	-135	+57	+126	+139	-35	-126	-91	-83	-222	-67					
3		-183	-26	-70	-218	-609	+304	+9	-109	+70	+35	+74	-52	-122	-152	-178	-139	+109	+735	-374	-74	-52	-70	+48	-104	-48					
4		-174	-48	-130	-96	-61	-165	+35	-91	-78	+174	+300	-265	-339	-348	-196	+52	+9	+87	+87	+9	+48	-130	-113	-144	-66					
5		-183	-222	-135	-87	-130	-39	-65	-9	+144	+44	+65	-74	-309	-174	-300	-257	-35	+83	+61	-48	-22	-44	-13	-87	-76					
6		-87	-122	-135	-39	0	+39	+65	+70	+126	+261	+130	-135	-344	-387	-235	-130	-48	-13	+65	-26	-35	-126	-126	-78	-55					
7	X	-239	-152	-157	-122	-87	-57	0	0	+130	+170	+61	-283	-313	-326	-200	-170	+26	+44	+52	+48	-17	+9	-52	-174	-75					
8	X	-183	-196	-170	-174	-187	-130	-44	-44	+170	+218	+26	-83	-165	-304	-304	-265	0	+44	+26	-13	-39	-44	-87	-91	-85					
9	X	-135	-178	-135	-139	-157	-61	-52	+9	+39	+113	+87	-44	-265	-239	-270	-196	-65	-13	+44	+13	+44	-83	-17	-113	-76					
10	X	-122	-87	-91	-122	-126	-44	-135	-22	+13	+126	+44	-65	-244	-392	-287	-48	-170	+83	+222	-52	-44	-61	+35	0	-66					
11	X	-178	-122	-126	-78	0	0	-39	-170	-130	+17	-17	+9	-113	-57	-218	-257	+35	-91	-35	-61	-87	-48	0	-35	-75					
12	X	-39	-87	-196	-178	-200	-130	-22	-78	+91	+122	+78	+39	-244	-261	-222	-52	-87	-109	-70	-83	-65	+30	-52	-261	-86					
13	X	-144	-117	-70	-135	-174	-170	-213	-87	-9	+87	+135	+113	-139	-357	-135	-261	-87	-39	-65	-78	-9	-209	-39	0	-92					
14	X	-96	-218	-209	-130	-161	-130	-174	-122	0	+135	+144	0	-178	-313	-257	-326	+135	+78	-139	+78	-174	-96	+78	+218	-77					
15	X	-304	-52	-200	-87	-139	-304	-96	-126	0	+200	+113	-61	-174	-139	-174	-130	-44	-83	-48	-57	-87	-122	-174	-96	-99					
16		-44	-104	-100	-83	-57	-61	-113	-87	-61	-26	-39	-109	-174	-209	-109	-265	+9	+348	+652	+322	-422	-44	+22	-91	-35					
17		-914	+883	-87	+139	-809	-304	+561	-104	+52	0	+52	-13	-130	-96	-231	+244	+178	-174	0	+200	-135	-122	-26	-222	-44					
18		-204	-170	-178	-183	-200	-130	-183	-313	-104	+278	+109	-52	..	..	..	-174	+57	+65	-126	-126	-83	-87	-9	-335	..		
19		+35	+130	-139	-78	-135	-17	-70	-57	+61	+57	+57	-87	-218	-231	-361	-218	-44	-48	-57	+413	-304	-130	0	-218	-73					
20		-13	-135	-126	-130	-44	-52	-39	-135	-87	+130	+196	0	-100	-387	-413	-265	+9	+57	+52	+78	-96	-78	+44	-218	-73					
21		+196	-300	+65	-257	+44	-157	-35	-135	-26	+39	+218	+100	-87	-13	-157	-130	-122	+187	+218	-126	-130	-61	-17	-226	-42					
22		-44	-178	-178	-135	-287	-87	-183	-239	-170	-44	0	-61	-348	-457	-157	+52	+57	+130	-183	-104	-170	+239	-235	-130	-113					
23		-48	-326	-222	-365	-48	-892	+35	+244	+52	+178	+126	-22	-74	-196	+26	-483	-144	-152	-44	+196	-218	-52	-30	+52	-100					
24		-152	-209	-174	-652	-44	-65	-144	+48	+200	+461	+283	-213	-496	-535	-209	+87	-122	-70	+170	-209	-130	-152	-139	-157	-109					
25		-313	-78	+39	-226	-139	-174	-152	-39	+218	+392	+326	+9	-274	-531	-566	-274	+104	-9	+144	-144	-174	-87	-91	-130	-90					
26		-65	-152	-130	-130	-157	-130	-209	-65	+196	+74	+130	-387	-513	-392	-152	+70	-91	-96	-44	-44	-44	-57	-122	-130	-110					
27		-100	-122	-139	-178	-170	-213	-78	-52	-04	+87	+139	0	-139	-265	-122	-313	+104	+618	+218	+200	+283	+170	+9	-226	-16					
28		-30	-304	-178	-87	-622	-178	-174	-218	-157	-96	-61	-130	-257	-187	-331	-104	-13	-87	0	-170	-96	-52	-78	-135	-156					
29	X	-44	-87	-39	-130	-130	-139	-170	-135	-83	+57	+139	-26	-170	-178	-178	-91	-122	-130	-96	-87	-100	-126	-104	-78	-94					
30		+187	+161	-57	-196	-44	-631	-26	-218	-126	+91	+257	+52	-265	-300	-152	-44	+130	+126	+126	-9	-83	-139	-174	-257	-65					
31		-87	-226	+309	-152	-39	-78	-130	-183	-57	-52	0	-113	-200	-174	-178	-104	-44	-13	-9	+61	-152	-157	-17	-174	-82					
MEANS ALL DAYS		-129	-111	-107	-130	-158	-146	-60	-64	+30	+112	+102	-69	-228	-281	-228	-142	0	+36	+41	+11	-82	-75	-61	-124	-77					
MEANS 10 DAYS		-148	-130	-139	-130	-136	-116	-94	-78	+22	+124	+81	-40	-200	-257	-224	-180	-38	-22	-11	-29	-58	-75	-41	-63	-83					

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE 04										LENGTH IN KMS 93.9										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		- 24	-583	+341	+ 66	- 36	0	- 69	+111	+150	+158	+179	+ 78	- 87	- 36	-209	-158	- 27	+ 42	+ 87	+170	+260	-197	-138	- 75	0																
2		- 9	- 12	-460	+215	+ 60	- 96	- 27	+ 96	+164	+ 42	+ 6	+209	+233	-202	-275	-176	+ 15	+ 75	+155	+ 9	- 30	- 18	- 6	-341	- 16																
3		- 57	+ 45	+ 15	-120	-344	+233	- 60	-144	+ 57	+ 78	+155	+ 93	+ 72	+ 36	- 51	-182	+242	+658	-407	- 96	+ 6	+ 30	+126	-191	+ 8																
4		- 15	+ 30	- 57	- 30	+123	- 90	+ 42	- 72	- 75	+102	+386	+135	-242	-254	-132	- 21	- 87	- 42	+ 51	- 6	+164	- 6	0	- 63	- 7																
5		- 84	- 69	-132	- 60	- 57	- 12	- 6	+ 78	+ 96	+ 78	+212	+147	- 36	+ 27	-269	-344	-112	+ 30	+ 63	0	+ 78	+ 33	..	..	..													
6		..	..	..	+182	+203	+ 84	+ 36	+ 39	+120	+203	+329	+209	0	-164	-179	-206	-138	- 96	+ 9	- 24	- 6	- 63	- 39	+ 42	..													
7	X	-254	0	- 99	- 54	- 54	- 30	+ 12	- 30	+ 33	+132	+164	- 51	-135	-197	-179	-176	- 39	+ 6	+ 33	+ 72	+ 60	+ 90	+ 42	- 36	- 29																
8	X	- 36	- 63	- 42	- 81	- 99	- 75	+ 60	- 66	+ 69	+209	+176	+185	+117	- 96	-299	-335	- 90	+ 42	+ 24	+ 15	+ 24	+ 30	+ 24	0	- 17																
9	X	0	- 99	- 30	- 87	- 66	- 6	- 30	- 18	+ 84	+114	+120	+209	+ 30	- 42	-126	-191	- 96	- 66	+ 33	+ 66	+126	- 30	+ 84	+ 12	0																
10	X	+ 36	+ 9	- 36	- 30	- 54	+ 6	- 93	- 15	- 57	+ 54	+179	+170	- 18	-257	-164	- 33	-239	+179	+377	- 18	- 90	- 27	+ 84	+ 33	0																
11	X	- 75	- 15	- 42	- 18	+ 30	+152	- 54	-114	-206	+ 33	+ 81	+185	+120	+ 63	-117	-120	+ 66	-147	- 33	- 24	- 21	0	+ 90	+ 60	- 4																
12	X	+ 63	0	- 96	- 90	- 90	- 96	- 27	- 48	0	+123	+221	+314	+ 33	- 48	- 96	+123	- 90	-209	- 90	- 24	+ 69	+167	+ 6	-126	0																
13	X	- 27	+ 33	0	- 27	- 27	+ 30	- 33	- 42	- 36	+ 9	+176	+353	+120	-150	- 63	-179	- 63	- 57	- 36	0	+ 90	-105	+ 27	+123	+ 5																
14	X	+ 57	-117	- 90	- 33	- 90	- 57	- 90	- 66	- 30	+108	+253	+242	- 36	-215	-179	-117	+284	- 21	-105	+117	-164	+ 21	+185	+182	+ 6																
15	X	-117	- 90	- 75	- 48	- 42	-167	- 15	- 66	- 54	+308	+227	+167	- 54	- 57	- 78	- 69	+ 30	-123	- 42	0	- 18	- 60	- 51	- 30	- 22																
16		+ 33	- 12	- 36	- 57	- 90	- 57	-123	- 33	- 45	- 57	- 27	+147	+ 72	- 81	- 72	-182	+126	+463	+721	-105	-535	+ 57	+ 54	-114	+ 2																
17		-721	+538	+263	- 90	-293	-230	+431	+ 96	- 36	- 18	+ 27	+ 63	+ 51	+ 63	- 21	+395	+120	- 99	- 72	+117	+141	- 72	+ 48	- 66	+ 26																
18		- 87	-129	-120	- 66	- 90	+ 12	- 63	+ 33	-197	+132	+257	+200	..	..	..	+129	+ 48	+ 36	-138	-105	- 18	- 24	+111	-108	..													
19		- 24	+182	- 75	+ 21	- 45	-117	- 30	- 57	- 24	+ 72	+161	+197	+ 30	-117	-269	-167	+ 30	- 42	-120	+239	-236	- 60	+152	-182	- 20																
20		+105	- 51	- 66	- 72	- 15	- 36	- 9	- 93	-147	+ 90	+305	+236	+185	-123	-359	-359	- 66	0	+ 63	+ 60	- 45	0	+ 90	-129	- 18																
21		+269	-185	+ 30	-203	- 15	- 60	+ 6	-111	-108	- 15	+311	+568	+353	- 21	+ 39	- 93	-215	+144	+359	- 21	-224	- 66	- 36	- 27	+ 28																
22		0	- 87	- 78	- 51	-203	- 18	-120	-185	- 63	- 90	+ 96	+218	- 36	-182	0	+197	+305	+203	-102	-170	-164	+323	-129	- 36	- 16																
23		+ 15	-359	+ 60	- 90	- 72	-505	- 36	+ 72	+ 30	+102	+239	+314	+197	+114	+ 48	-541	-209	-126	+ 42	+176	-117	0	+ 42	+ 63	- 23																
24		+ 63	-102	-105	-329	- 69	- 30	- 63	- 36	+311	+658	+454	+302	-419	-374	-152	+ 84	-194	- 90	+161	-176	-120	- 90	- 57	- 42	- 17																
25		-203	+ 48	0	- 30	- 96	- 60	-150	-102	+729	-209	+353	+329	+ 93	-260	-446	- 96	+ 30	0	0	..	..	..	..	..	..										
26		..	..	..	..	-150	- 45	-120	- 48	+194	0	+263	- 84	-257	-269	- 99	+ 66	- 57	- 84	- 30	+ 9	+ 18	+ 15	- 30	- 24	..												
27		+ 6	- 45	- 90	-126	-120	-147	- 6	-120	-227	+ 78	+209	+425	+493	+155	- 30	- 45	+ 45	+858	+236	+368	+215	- 12	- 27	-254	+ 77																
28		- 84	-203	-236	-102	-496	-147	-209	-209	-197	-126	+ 27	+ 36	- 54	- 78	-176	- 81	+ 24	- 48	0	-120	- 39	- 6	- 15	-102	-110																
29	X	+ 24	- 27	+ 30	- 57	- 78	- 63	- 93	- 90	- 96	- 27	+150	+108	+ 30	+ 12	- 6	- 60	-150	-155	- 90	- 48	- 36	- 30	- 24	0	- 32																
30		+135	+ 90	+ 72	-150	0	-236	-111	-123	-179	- 18	+164	+176	- 27	- 66	- 72	- 24	+135	+218	+126	+ 93	+ 27	- 96	-152	-176	- 8																
31		0	-616	+691	-197	+ 45	+ 96	- 60	-105	- 93	- 30	+126	+ 96	- 72	- 63	- 69	- 33	- 6	+ 48	+ 42	+ 54	- 12	- 45	- 30	- 63	- 12																
MEANS ALL DAYS		- 25	- 67	- 8	- 71	- 82	- 67	- 31	- 56	- 30	+ 80	+179	+200	+ 37	- 85	-120	- 98	- 6	+ 66	+ 54	+ 29	- 26	- 8	+ 15	- 61	- 8																
MEANS 10 DAYS		- 33	- 37	- 48	- 52	- 57	- 31	- 36	- 56	- 29	+106	+185	+188	+ 21	- 99	-131	-116	- 39	- 55	+ 7	+ 16	+ 4	+ 6	+ 47	+ 22	- 9																

* = 10 LEAST DISTURBED DAYS

TABLE 129

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-157	-148	-130	-83	-161	+44	-205	-227	-262	-327	+174	-52	-9	+166	+301	+196	+262	+296	+488	+157	+628	-61	-109	-187	+19
2		-257	-288	-209	-279	-349	-257	-462	-231	-153	-514	+118	-266	-436	-96	+35	+166	+87	+22	-31	-52	-87	-166	-144	-140	-166
3		+96	+31	+139	-462	-301	-881	+602	-48	-135	-35	-9	-187	-388	-257	-32	+83	+39	+87	+26	+13	-39	-170	-183	-196	-96
4	X	-144	-153	-283	-70	-131	-144	-36	-87	-44	-28	-9	-192	-353	-310	-118	-35	0	+6	-9	-122	-96	-174	-153	-174	-121
5		-187	-131	-114	-52	-126	-35	-35	+48	+100	+166	+48	-70	-92	-392	-397	-109	-57	+83	-78	+52	-35	+22	-87	-214	-75
6		-249	-131	-126	-174	0	-52	0	0	+83	+36	0	-140	-344	-384	-196	+39	-39	-92	-29	-44	+9	-17	-48	-192	-85
7		-214	-83	-48	-83	-78	-48	-65	-126	-87	+214	+9	-170	-174	0	+131	-122	-122	+135	+57	0	-44	+31	-70	0	-40
8	X	-218	-118	-33	-44	-140	-92	+44	+33	+87	+44	+44	-218	-340	-196	-131	-57	+39	+44	+135	+96	-65	-44	-44	-52	-55
9		-44	-39	-118	-174	-113	-57	-96	+109	+44	+209	+131	-57	-166	-196	-131	-257	-144	-17	-48	-52	-26	-39	-44	+31	-58
10		-131	-122	-240	-87	-192	-218	-266	-131	+310	+83	-74	-153	-275	-288	-174	+22	-52	-44	-26	-39	+44	-35	-109	-179	-99
11	X	-166	-170	-174	-179	-166	-126	-83	+13	+100	+166	+174	-48	-209	-231	-305	-314	-135	+92	-22	-83	-61	-83	-118	-105	-93
12	X	-140	-52	-61	-144	-122	-135	-135	0	+48	+57	+13	-166	-192	-314	-349	-179	-262	-26	-9	+39	-39	+135	-92	-61	-91
13		+126	-440	+13	-323	+13	-523	-83	-48	+174	-205	-131	+166	+122	+480	-214	-218	+693	-741	+253	+833	-253	-453	-480	-235	-61
14		-584	-83	+140	-349	-122	-275	-122	+78	-65	-157	-39	-305	-227	-218	-144	-144	+44	+135	-314	-65	-39	-301	-131	-57	-139
15	X	-371	-105	-205	-205	-288	-218	-131	-83	-131	+39	-227	+26	-266	-74	-353	-131	-48	-13	-122	-74	-92	-74	-78	-244	-144
16		-288	0	-9	-70	-218	-153	+209	-113	+122	-74	+44	-78	-331	-305	-214	-157	-87	+100	+87	-26	-196	+131	-61	-296	-83
17		-148	-310	-183	0	-39	-113	-109	-131	-44	-57	+17	-44	-288	-92	-201	-131	+52	+44	+126	+549	-423	-174	-205	-126	-85
18		-87	-244	-52	-331	-35	+44	0	+57	+244	+61	0	-170	-118	-375	-292	-170	-96	-83	-9	+44	0	-92	-174	-179	-86
19	X	-174	-126	-140	-96	-87	-87	-22	+92	+87	+153	+140	-227	-523	-519	-384	-131	-13	0	+9	-35	-61	+17	-65	-57	-94
20		-83	-153	-105	+109	-70	-166	0	+83	+174	+179	+126	-52	-240	-576	-510	-26	+26	+131	+61	-65	-39	-113	+39	-218	-62
21		-205	-39	-340	-458	-318	+288	-35	+174	+131	+235	-87	-314	-344	-183	-288	-131	-131	+262	0	+170	-131	-153	-209	-179	-95
22	X	-218	-148	-270	-327	+44	+92	+9	+96	+179	+196	-52	-205	-371	-471	-410	-257	-70	+44	+22	+65	-83	+17	+153	-105	-86
23	X	-301	-179	-96	-131	-105	-262	-39	+174	+223	+131	+126	+39	-87	-519	-475	-187	-314	-13	-140	-78	-87	-83	-87	-92	-106
24		-39	+126	0	-39	-126	+266	-179	+78	+48	-157	-126	-126	-126	-440	-179	-283	+52	-9	+344	-196	+122	-22	-9	-109	-44
25		-222	-96	-462	-118	-253	-222	-192	-179	-192	-231	-262	-170	-227	-340	-218	0	+48	+87	-70	0	+113	+235	+78	-39	-122
26		-13	-292	-414	-52	-323	-475	-39	-61	+109	+122	-87	+9	-83	-179	+44	0	0	-87	-170	-131	-39	-44	-96	-131	-101
27	X	-52	-262	-187	-148	-140	-135	-70	+227	+305	+109	-131	-257	-270	-301	-257	-201	-109	-87	-87	-87	-44	-78	-126	-131	-105
28	X	-126	-148	-135	-122	-92	-122	0	+105	+70	-166	-344	-296	-174	-218	-126	-44	-26	-61	-122	-87	-44	-83	-135	-126	-109
MEANS ALL DAYS		-164	-143	-144	-160	-144	-145	-61	-3	+54	+11	-15	-133	-244	-235	-208	-87	-15	+11	+11	+28	-40	-67	-100	-135	-89
MEANS 10 DAYS		-191	-156	-159	-147	-123	-123	-52	+58	+92	+70	-27	-154	-279	-315	-291	-154	-94	+3	-34	-37	-67	-45	-74	-115	-101

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LINE										LENGTH IN KMS										DIRECTION										MEAN
		EASTWARD					OW					93.9					E. 0° 5N																									
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																			
1		- 98	- 74	-224	-128	-268	+ 45	-143	-149	0	-140	+453	+262	+191	+238	+438	+417	+361	+510	+414	+232	+349	+122	-149	- 72																	
2		-235	-340	-259	-402	-185	-352	-247	-135	+ 74	-328	+414	+101	-328	-149	- 12	+143	+104	- 12	- 27	- 33	- 33	- 51	- 83	- 99																	
3		+ 89	+ 80	+ 89	-226	-536	-101	+372	- 72	-101	+ 89	+ 33	- 30	-215	-185	-101	+ 30	+ 45	+119	+ 48	+ 60	+ 30	- 48	- 95	- 30																	
4	X	- 57	- 86	-215	- 30	- 74	-116	- 54	- 45	- 18	+ 30	+116	+ 83	-179	-283	- 83	- 30	+ 57	+ 92	+ 15	- 36	+ 36	- 45	+ 30	- 6																	
5		- 60	- 27	-143	- 6	- 54	- 54	- 30	+ 33	0	+149	+206	+122	- 36	-250	-253	- 36	-149	+167	+301	..	..	..	..	..												
6		..	..	..	..	..	..	..	..	+ 60	+119	+122	+167	-104	-247	-122	+ 45	+ 18	- 24	+ 80	+143	+122	+113	+119	- 42									
7		+ 66	+ 27	+ 30	+ 18	0	+ 63	+ 27	-265	-131	+ 63	+ 27	+ 36	- 15	+167	+334	- 21	-122	+268	+ 18	+104	+ 9	+ 77	+ 15	+ 74																	
8	X	-158	- 30	+209	+ 72	+ 45	+ 66	+ 63	- 24	+134	+122	+137	+ 66	- 83	- 74	- 86	- 74	+ 66	- 9	+ 89	+125	- 54	- 53	+ 15	+ 48																	
9		- 30	- 33	+ 45	- 72	- 69	- 9	0	- 60	- 74	+137	+221	+203	+152	..	..	..	..	..	..	..	..	..	..	..						
10		..	..	..	..	..	..	..	- 30	+274	+289	+ 77	+179	+ 27	- 60	- 30	- 30	- 72	- 63	- 30	- 21	+116	- 6	- 63	- 89										
11	X	- 18	- 57	- 48	- 54	- 30	- 6	+ 30	+ 30	+ 66	+113	+158	+137	+ 92	+ 42	- 77	-212	- 60	+ 77	+ 18	- 60	- 18	- 36	- 54	- 18																	
12	X	- 89	- 27	+ 18	- 66	- 89	- 48	- 36	- 18	- 54	+149	+ 98	+ 54	+ 54	-110	-215	-152	-179	+ 39	+ 33	+128	+149	+343	- 36	+119																	
13		+238	-432	+209	- 89	- 12	-143	+ 72	- 39	+387	-244	0	+522	+638	+1031	+ 30	-107	+1043	-670	- 66	+742	- 12	+402	-578	-554																	
14		-328	- 69	+313	-253	-113	- 86	+ 48	- 95	+ 69	- 45	+ 74	-119	- 66	-149	- 95	-104	+122	+170	-149	+146	+ 48	-185	+143	+250																	
15	X	- 60	- 33	- 89	- 33	- 60	- 30	+ 30	- 39	- 27	+221	-143	+262	0	+143	-313	-176	- 66	- 54	- 77	- 36	- 18	+ 6	+ 48	-191																	
16		-173	+ 24	+ 30	- 48	-149	- 86	+ 74	-116	+158	- 15	+134	+229	- 48	- 33	- 63	- 18	- 36	+241	- 33	-209	-259	+286	+ 72	-170																	
17		- 66	-226	-113	+ 45	0	- 83	- 92	-104	-134	- 92	+ 66	+122	- 27	+167	-119	-107	+116	+ 36	+206	+438	-280	- 74	-152	- 24																	
18		+ 30	- 80	- 95	- 77	- 74	+ 27	+ 15	- 6	+152	+ 66	+ 89	+122	+310	-176	-131	-188	-137	-143	+ 36	+ 72	+ 60	+ 15	- 95	- 69																	
19	X	- 60	- 36	- 72	- 42	- 30	- 57	0	+ 95	+ 69	+125	+244	+137	-206	-307	-271	-152	- 60	+ 21	+ 30	0	- 9	+119	- 60	+149																	
20		0	- 39	- 57	+ 30	- 18	-107	- 6	- 42	+143	+209	+358	+349	+206	-286	-343	- 30	- 51	-128	+ 60	+ 89	- 89	-113	+104	-119																	
21		- 30	+ 77	-203	-235	-191	+224	-104	+238	+ 18	+331	+212	-122	- 12	+140	-149	-226	-152	+137	+ 66	+ 12	- 48	+ 18	-116	- 69																	
22	X	- 89	- 60	-119	-134	+ 33	+ 92	- 9	+ 24	+110	+155	+119	+179	+ 39	-185	-370	-283	-191	- 9	+ 48	+ 98	- 57	+103	- 57	+119																	
23	X	-116	- 60	- 30	- 86	- 27	-191	- 83	+ 30	+ 98	+119	+185	+361	+390	- 36	-235	- 30	-447	+ 36	-137	-116	- 95	- 27	- 30	0																	
24		0	+247	- 27	+ 92	- 83	+229	-170	+ 72	+ 30	-119	+101	+179	- 45	+ 98	-134	+ 45	- 24	- 21	+218	-143	+ 80	+ 63	- 24	0																	
25		..	..	..	..	..	..	..	..	+ 63	-125	-110	-104	+ 33	0	-137	-113	+ 33	+149	+119	+ 54	+191	+204	- 86	+268									
26		+ 24	-185	-301	+ 66	-179	+ 60	-179	- 69	+ 63	+468	- 15	+ 77	+ 72	+ 83	+265	- 57	- 86	-101	-149	+ 89	+ 48	- 6	- 39	- 42																	
27	X	+ 80	-149	- 92	- 60	- 83	- 66	+ 30	+104	+283	+200	+107	+ 36	+ 21	- 74	-122	-149	-119	- 89	- 57	+ 33	+ 30	0	- 27	- 42																	
28	X	- 24	- 57	- 57	- 30	- 42	- 66	- 24	+ 9	+ 36	- 27	-119	+ 6	+ 83	- 51	- 36	- 63	- 60	- 48	- 66	- 24	+ 60	- 30	0	- 57																	
MEANS ALL DAYS		- 44	- 72	- 48	- 75	- 94	- 32	- 17	- 30	+ 61	+ 59	+129	+134	+ 38	0	- 82	- 67	+ 5	+ 23	+ 23	+ 64	- 3	+ 40	- 51	- 37																	
MEANS 10 DAYS		- 59	- 60	- 50	- 52	- 36	- 42	- 6	+ 15	+ 73	+111	+ 95	+136	+ 21	- 94	-181	-132	-106	+ 6	+ 10	+ 5	+ 2	+ 40	- 17	+ 12																	

* = 10 LEAST DISTURBED DAYS

TABLE 131

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 19°.5 E									
		NORTHERLY					LINE					OM					56.8														
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN							
1		-187	-257	-301	+336	-706	-122	-96	+266	+179	-31	-131	-52	-126	-78	-65	0	+17	+39	-87	-13	-100	-122	-87	+35	-70					
2		-131	-436	+48	+92	-109	-218	-301	+157	+35	-196	-179	-174	-39	+48	-31	+87	+44	0	-39	+240	-166	-174	-135	-148	-72					
3		-87	-126	-135	-39	-61	0	+57	+135	-17	-462	-78	-209	-222	-87	+135	+314	-61	+44	+183	-183	-61	-92	-122	-288	-61					
4	X	-353	+9	-126	+39	+26	-32	+61	+201	-9	-31	-214	-375	-379	-283	-214	-131	+26	+9	+35	-13	-44	-87	-32	-31	-81					
5	X	-170	-135	-135	-105	0	-44	+135	+296	+153	+44	-161	-384	-388	-279	-144	+61	-218	-78	+92	+31	+44	-52	-92	-222	-73					
6	X	-170	-166	-105	+9	-39	-33	+61	+96	+70	+105	-209	-488	-340	-270	-92	-144	-35	+13	+31	-31	-44	-92	-218	-214	-96					
7	X	-174	-166	-92	-179	-87	-35	-39	+249	+100	+26	-173	-262	-462	-384	-257	+22	+61	+61	-22	-100	-48	0	-39	-87	-87					
8	X	+39	-52	-183	-52	-83	+70	0	-17	-39	-39	-92	-227	-388	-519	-283	-170	-35	+44	+9	-39	0	-44	-87	-74	-94					
9	X	-122	-166	-174	-126	-87	+70	-196	+87	+44	+126	-153	-262	-288	-227	-166	-44	+44	0	+35	-35	+44	-87	-83	-83	-81					
10		-44	-87	-96	-126	+44	-109	+57	+201	+105	+78	-61	-218	-174	-340	-218	-44	+22	+122	+35	+74	+9	+9	+96	+109	-83					
11		+52	+122	-296	+131	-131	-48	+9	-9	-61	+135	-131	-122	-140	-87	-100	-83	+92	-31	+44	-39	-61	-39	-126	-100	-42					
12		-148	-92	-87	-57	-26	+9	0	+122	+174	+131	+13	-122	-240	-301	-471	-235	-61	+174	-44	+87	+650	+331	-140	-83	-17					
13		-214	0	-39	-286	+65	-39	+327	+231	+235	-100	-619	0	-413	-183	-44	+26	0	+44	-35	-13	-9	-52	+17	-31	-48					
14		+1164	-1138	+192	+323	-501	-222	+519	-1134	+514	+1025	-58	-201	-113	+153	+92	-257	-126	+222	+240	+52	-92	0	-70	+70	+15					
15		+227	-372	+31	+105	-283	-126	-35	-349	+153	+196	+436	-392	-232	-170	-161	-296	-78	+83	+61	-174	-52	-61	-9	-122	-88					
16		-87	-218	-87	-52	-83	-65	-61	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19	X	-76	-368	+9	+39	-87	+44	+70	+209	+44	-100	-392	-545	-436	-174	-9	+13	+166	+83	+39	-157	-87	-140	-83	0	-82					
20		-136	+26	-35	-32	-13	-39	+179	+488	+179	-136	-240	-436	-458	-231	-3	+131	+157	-78	-61	-9	-22	-48	+92	-83	-41					
21		+17	-41	-349	-174	+13	-87	-9	+392	+61	-78	+48	-292	-397	-244	-270	+275	+131	-44	+257	-174	-52	-179	-153	-44	-58					
22		-209	-205	-270	-135	-113	-48	+44	+161	+52	+70	0	-218	-445	-571	-358	-218	-44	+9	0	+179	-209	-126	-87	-100	-118					
23		-135	-100	-87	-87	+9	-65	+166	+358	+349	+196	-122	-514	-706	-158	-379	-305	+52	+244	+310	+637	-358	-344	+135	-222	-68					
24		-331	-218	-166	-87	-35	-105	0	+157	-35	+314	+57	-74	-436	-235	-392	-388	-174	-3	+266	-39	+70	-105	-266	+192	-85					
25		-113	+227	-305	-131	-173	-93	+61	+157	+161	+148	-126	-358	-545	-471	-305	-183	-57	+148	0	+44	-83	+144	-9	0	-78					
26	X	-122	-44	-253	-74	-179	-100	-48	+227	+113	-122	-218	-349	-449	-305	-153	-113	+35	+113	0	+74	-35	-26	-187	-52	-94					
27	X	-57	-279	-174	-135	-52	-32	-135	+122	-113	-44	-36	-153	-231	-305	-384	-148	0	+92	0	-48	-44	-39	-39	-113	-103					
28	X	-78	-70	+31	-187	-35	-83	-92	+57	+17	-83	-153	-349	-209	-44	-109	+44	+39	-83	-83	-87	-61	-87	-61	-83	-88					
29		-113	-173	-44	-122	-131	-157	-48	+87	-87	-32	-157	-222	-270	-279	-257	-70	-44	-35	-131	-57	-48	-87	-57	-100	-112					
30		-118	-70	-153	-331	+26	-305	+388	+528	-170	-131	-187	-148	-35	+9	-144	-358	0	+35	-44	-13	0	+262	-214	-35	-46					
31		-273	-105	-484	+61	+35	+9	+35	+78	+44	-214	-279	-253	-244	-144	-100	-9	+48	0	-122	-122	-122	-126	-135	-113	-107					
MEANS ALL DAYS		-76	-179	-135	-50	-97	-70	+42	+127	+77	+24	-142	-264	-319	-244	-172	-85	0	+48	+35	+3	-36	-52	-80	-72	-72					
MEANS 10 DAYS		-128	-146	-121	-77	-62	-30	-18	+153	+29	-12	-187	-339	-371	-296	-175	-76	+9	+38	+14	-40	-30	-64	-97	-96	-88					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										E.O. 5.N	MEAN
		EASTWARD					LINE ON					33.9					33.9					33.9											
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24										
1		-71	-137	-318	+398	-175	-131	+71	+104	+15	+77	+107	+422	+27	+42	+12	+77	-30	+59	-33	+56	0	+39	+175	+33								
2		-181	+50	-48	+151	-116	+45	+199	+356	+353	-30	-104	-9	+148	+202	+86	+80	+6	+83	+30	+318	-74	-77	-24	-30	+59							
3		+33	+89	-92	-6	-27	+30	+59	+157	+235	-146	+148	+184	-30	-83	+122	+190	-30	+65	+104	-89	+71	-9	-59	-193	+30							
4	X	-163	+59	-71	+48	+62	-27	+12	+116	+119	+42	-6	-24	-27	-74	-148	-202	-95	-30	+48	+33	+30	+30	+53	+62	-6							
5	X	-71	-86	-95	-65	+9	-33	+65	+196	+193	+74	-53	-86	-53	-30	-6	+125	-238	-89	+71	+125	+119	-30	-21	-140	-5							
6	X	-89	-128	-77	+18	+6	-33	+27	+59	+39	+178	+89	-92	+71	+30	-6	-125	-92	-27	+27	-27	+6	-24	-89	-107	-15							
7	X	-59	-62	-30	-104	-68	-24	+12	+148	+119	+48	-27	+65	-71	-86	-33	+264	+178	+101	-116	+83	-92	+59	-33	-53	+9							
8	X	+42	+6	-89	-89	-9	+59	+6	-86	-89	-30	-27	+59	+48	-178	-146	-24	-9	+202	+77	-83	+128	-39	-36	-39	-14							
9	X	-59	-89	-125	-98	-12	+95	-113	+89	-101	+27	-27	+65	+53	+53	+42	+12	+56	+92	+143	+6	+24	-30	-27	+252	+14							
10		+270	+178	+151	+154	+235	+59	+214	+232	+202	+196	+125	+235	+549	-33	-21	0	+15	+116	+18	-6	-30	-80	+175	+92	+127							
11		+53	+122	-377	-27	-131	-146	+178	+89	-107	+9	-59	+89	+181	+160	+42	+6	+101	-18	-9	-30	+6	+45	-36	-113	+1							
12		-33	-30	-59	-30	0	+9	-27	+30	+24	+83	+53	+125	+113	-9	-294	-92	+36	+431	+27	+27	+460	+92	+125	+33	+46							
13		-134	0	+50	-181	+104	-30	+208	+202	+377	+264	-368	+223	+137	-89	0	+48	+18	+148	-48	+163	+104	-21	+92	-339	+39							
14		+980	-644	+89	+285	-9	-252	+460	-805	+698	+1007	-166	-125	+15	+392	-50	-193	+74	+119	+220	+134	+56	+116	+148	-624	+80							
15		+315	-579	+56	+71	-68	+98	+131	-211	-65	-30	+416	-178	+178	+65	-172	-244	-50	+110	+89	-330	+89	+33	+83	+74	-5							
16		-113	-74	0	-74	0	-80	+122	+59	+386	+446	-83	-359	-238	-74	-125	-74	+285	-62	+104	-33	+77	-208	+148	-172	-6							
17		0	-39	-113	-59	+119	+83	-45	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	+300	-6	-15	-238	-199	-62	+101	-30	+83	+535	-116	-252	-134	-71	+128	+62	..	
19	X	-59	-252	-33	+30	-15	-330	+30	+122	+83	-36	-116	-119	+27	-30	-36	+30	+178	+208	-18	-62	-56	-59	+6	+56	-19							
20		-92	+59	-24	-86	-36	-92	+86	+333	+202	+45	+48	-137	-273	-48	-45	+116	+181	-83	+59	+48	+36	-48	+148	-342	+2							
21		+140	-59	-172	-208	-6	-27	-92	+475	+434	+65	+261	-104	-175	-148	-137	+475	+92	-56	-148	+86	+119	-119	-74	-146	+20							
22		-137	+42	-157	-92	-30	-9	+27	+89	+65	+178	+202	+77	-157	-241	-273	-235	-160	-30	+68	+181	-107	-71	-24	-33	-34							
23		-56	-53	-56	-65	+30	-45	+86	+184	+214	+247	+184	+59	-267	-309	-255	-315	-27	+235	+431	+359	-196	-282	+235	-154	+8							
24		-193	-116	-107	-71	+12	-98	-59	+39	-59	+291	+318	+163	-30	+282	-169	-303	-146	0	+255	-196	+125	-172	-413	+190	-13							
25		-178	+303	-217	-65	-122	-24	+42	+104	+71	+116	+77	-77	-166	-157	-119	-151	0	+140	+86	0	-89	+175	-21	+27	-10							
26	X	-89	-18	-172	-36	-125	-62	-107	+119	+92	-80	+18	-140	-235	-62	+33	-9	+89	+89	+83	+107	-196	+131	-74	-12	-27							
27	X	-53	-238	-146	-89	-24	-48	-98	-9	-30	-36	+6	+30	-18	-62	-249	-116	+62	+98	-15	-24	+9	+27	+30	-30	-43							
28	X	-24	-27	+42	-190	+12	-27	-92	+65	+62	0	+6	-107	-92	-36	+21	-30	+119	+113	-53	-62	-36	-27	-9	-36	-17							
29		-83	-134	0	-62	-59	-71	+6	+59	-56	0	-6	-30	-77	-95	-226	-30	+12	+33	-95	+6	+24	-6	-36	-24	-40							
30		-65	-36	-122	-214	-12	-377	+395	+784	-220	-21	+30	+178	+410	+285	-56	-356	-172	+15	+30	+71	+92	+285	-24	0	+38							
31		-244	-134	-342	+33	+33	+77	0	+83	+92	-148	-154	-71	-59	+18	-59	-30	+36	+30	-15	-24	-30	-42	-59	-30	-43							
MEANS ALL DAYS		-14	-69	-88	-23	-19	-52	+64	+110	+115	+98	+31	+11	0	-11	-78	-38	+17	+72	+49	+29	+23	-12	+8	-57	+7							
MEANS 10 DAYS		-62	-84	-80	-58	-16	-43	-26	+82	+49	+19	-14	-35	-30	-48	-53	-8	+25	+76	+25	+10	-6	+4	-20	-5	-12							

TABLE 133

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										DIRECTION N 19.5 E										MEAN				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20		20-21	21-22	22-23	23-24
1	X	- 87	- 57	- 87	-100	- 26	+ 44	+148	+265	- 57	-313	-392	-322	-435	-392	-117	- 22	+ 48	+ 87	- 9	- 48	- 87	-126	- 91	-144	- 97
2	X	-148	-117	- 87	- 91	- 91	0	+113	+270	+130	-130	-392	-392	-392	-392	-278	-109	+ 35	+ 26	- 39	- 83	-126	-113	-130	- 91	-111
3	X	- 70	-104	- 83	- 96	-239	+ 57	+170	+339	+144	-257	-396	-426	-374	-426	-222	- 78	- 13	+ 96	+122	+ 13	0	- 57	- 26	- 96	- 80
4	X	-130	- 44	-104	- 78	- 61	- 44	+ 44	+183	- 70	- 44	-252	-304	-357	-505	-348	-179	0	+109	+ 83	- 17	0	- 48	- 70	-139	- 99
5	X	-183	- 91	-113	- 22	- 52	-152	- 9	+218	+104	+ 35	-130	-296	-435	-457	-339	- 87	- 48	+ 44	+ 35	- 39	- 44	- 52	- 70	-122	- 96
6	X	-165	- 91	-122	- 96	- 87	- 83	+ 35	+231	+ 96	- 74	-196	-261	-365	-522	-357	-178	- 35	+ 9	- 44	- 35	- 70	- 70	- 78	-170	-114
7		-130	-126	-104	- 83	- 78	- 74	+ 91	+191	+170	+ 13	-218	-461	-566	-478	-304	- 48	+ 70	+ 44	0	0	+ 83	+ 44	+ 87	+252	- 68
8		-309	-261	-170	-157	- 83	0	+ 35	-244	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9		..	..	..	..	..	..	..	-174	-357	-196	-300	-261	-218	-222	-296	-130	- 39	- 78	- 87	-218	- 87	-113	-130	-178	..
10		-222	-122	- 61	+387	-152	+ 39	-592	+531	-470	+165	-130	-361	+ 83	-130	-135	+304	+ 74	+ 13	+ 65	+174	+ 87	-596	+109	+113	- 34
11		-705	+104	+261	-796	+709	+161	+187	- 48	-478	-148	-178	+117	-304	-378	+ 87	+122	+ 44	-187	-174	+ 52	-183	-139	+218	-309	- 82
12		-135	-674	+ 44	+113	- 52	-148	- 96	+ 48	+187	+204	-370	-209	0	-291	-174	+109	- 70	+218	+344	+ 87	- 52	-526	- 9	-257	- 70
13		-196	-400	- 74	-135	-531	+178	+248	+331	+148	-104	-283	-596	-509	-231	+130	- 39	- 22	+ 78	+109	-109	-187	-252	-109	-126	-112
14		-218	+ 44	-135	+ 35	- 39	+ 9	+ 44	+204	+ 48	-117	-244	-387	-378	-265	-261	- 48	+130	- 22	- 74	+ 13	- 65	-322	+ 13	- 52	- 87
15		- 91	- 48	- 96	-313	-139	- 52	+ 61	+248	+144	-313	-544	-500	-339	-213	-130	- 39	+ 48	+ 83	-139	-130	-122	-139	-152	+326	-108
16		-157	-222	-178	- 70	+ 39	- 26	+165	+392	+261	-587	-740	-478	-444	- 70	-122	+261	+174	- 22	+ 39	+130	+ 9	-226	- 44	-126	- 85
17		-122	-248	+109	- 78	- 52	0	+148	+435	+226	-618	-657	-539	-365	-174	0	+ 57	- 9	- 44	- 87	- 65	+378	+618	-478	-331	- 79
18		- 83	- 96	- 57	+ 35	+ 9	+ 22	+130	+244	+218	- 87	-457	-513	-513	-261	-265	-209	+139	- 48	+ 13	-126	-122	-161	-161	- 96	-102
19		- 87	-135	-174	+ 78	+ 44	- 48	+283	+331	+ 44	-274	-300	-331	-444	-405	-326	-135	+ 39	+361	- 87	-135	-126	-170	-213	-139	- 98
20		-170	-122	-135	+ 35	- 35	0	+135	+313	+218	-183	-413	-392	-435	-357	-204	-170	-148	+130	+ 87	+ 44	- 96	+ 13	+ 9	-174	- 85
21	X	-157	-144	- 96	- 83	- 52	- 39	0	+183	+126	-239	-435	-357	-257	-218	-344	-144	- 87	- 26	- 61	- 83	- 91	-170	- 78	- 96	-123
22		-113	- 91	-109	- 39	- 9	-152	0	+157	0	-187	-358	-266	-131	- 87	-240	-126	-201	-122	- 78	-105	- 44	- 92	-131	-222	-114
23		-126	- 78	- 78	- 22	+ 83	+ 57	- 57	- 52	+ 9	- 13	-222	-249	-262	-209	-157	-218	+ 26	0	+ 87	+ 13	- 35	-218	-166	-174	- 86
24		-131	-131	-122	- 70	- 39	+ 13	+ 48	-131	-257	-257	-192	-131	- 65	+ 87	- 83	-166	-218	-183	-105	0	+201	-105	-131	- 96	- 94
25		- 44	- 96	- 48	- 96	- 87	-218	0	+ 13	-122	-174	-279	-262	- 96	+ 13	- 78	-183	-148	-131	- 87	- 87	- 44	- 52	+ 44	- 57	- 97
26		-122	-283	- 87	- 87	- 96	- 83	- 96	-113	-174	-266	-262	-157	- 92	-113	- 35	- 44	0	+131	- 96	-144	-126	-174	- 87	- 96	-113
27	X	-105	-131	- 57	- 87	- 48	- 83	+122	+ 70	+ 9	-222	-349	-318	-279	-166	- 87	- 78	- 78	- 52	-135	- 13	-131	- 83	-126	-122	-106
28	X	- 96	- 87	- 44	- 57	-105	- 70	+ 57	+283	+222	-183	-514	-536	-419	-388	-161	0	+ 13	- 13	- 52	- 87	-131	-131	- 70	- 48	-109
29	X	- 92	- 96	- 35	- 44	- 31	0	+105	+480	+227	-349	-828	-763	-523	-170	- 70	+ 48	+174	+ 87	- 52	- 57	- 92	- 87	- 78	- 57	- 96
30		- 52	-236	+140	+ 26	-100	+ 52	+201	+506	+366	-187	-558	-715	-567	-349	-140	- 13	+ 70	- 48	-174	-122	- 96	- 78	- 44	-109	- 95
MEANS ALL DAYS		-148	-142	- 62	- 65	- 47	- 23	+ 60	+219	+ 52	-175	-367	-372	-331	-267	-170	- 50	0	+ 22	- 18	- 34	- 47	-125	- 73	- 98	- 94
MEANS 10 DAYS		-123	- 96	- 83	- 75	- 79	- 37	+ 78	+252	+ 93	-178	-388	-398	-384	-358	-232	- 83	+ 1	+ 37	- 15	- 45	- 77	- 94	- 82	-108	-103

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD					LINE ON		LENGTH IN KMS 93.9								DIRECTION E 0° S N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	- 48	- 27	- 30	+ 24	- 6	+ 33	+113	+202	- 33	-178	-190	- 50	-157	-214	-110	- 30	+ 65	+137	+ 77	+ 24	0	- 27	- 27	+ 62	- 16
2	X	- 92	- 59	- 65	- 83	- 62	- 6	+ 18	+113	+113	+ 9	- 83	+ 30	- 36	-160	-178	-122	- 24	+ 30	+ 30	0	- 36	- 39	- 62	- 27	- 33
3	X	- 27	- 53	- 42	- 62	-143	+ 6	+ 33	+151	+ 89	- 62	-113	-110	-143	-107	-119	- 59	- 18	+154	+205	+134	+ 83	+ 59	+ 56	0	4
4	X	- 68	- 6	- 62	- 65	- 48	- 30	- 33	+ 86	- 27	+ 6	+ 30	+101	+ 30	-148	- 83	-172	- 95	+ 62	+ 86	+ 33	+ 89	+ 33	+ 24	- 62	- 13
5	X	-151	- 48	- 65	- 6	- 27	- 83	- 98	+ 89	+ 18	+ 83	+ 30	+ 27	- 30	- 95	-154	- 53	- 92	- 30	+ 27	+ 6	+ 30	+ 30	0	- 62	- 27
6	X	-122	- 33	- 59	- 62	- 59	- 59	- 30	+143	+ 95	+ 6	- 30	+ 30	- 83	-267	-244	-148	- 56	+ 53	+ 30	+ 48	+ 6	+ 30	+ 15	- 71	- 36
7		- 59	- 65	- 62	- 27	- 56	- 56	0	+ 74	+119	+ 56	- 48	-160	-285	-267	-202	- 30	+119	+148	+ 71	+ 89	+172	+211	+178	+252	+ 7
8		-291	-229	-119	-148	- 92	+ 53	+ 30	-261	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9	..	..	..	..	..	..	..	..	-205	-220	- 89	- 86	- 30	- 30	- 42	-181	-122	- 9	- 59	- 45	-119	+ 27	- 27	- 36	-104	..
10	-190	-107	-101	-193	+ 89	+ 21	-446	+478	-169	+205	+416	+267	+371	-101	+ 77	+ 92	- 62	+116	+419	+416	+356	-802	+252	+184	+ 66	
11	-401	-315	+431	-636	+475	+434	0	+748	-481	+413	+12	+487	- 74	-282	+226	+ 92	+267	-309	-330	+172	-339	+143	+ 32	-116	+ 30	
12	+261	-428	- 80	+235	- 59	+ 86	+175	-187	+163	+523	-238	+ 89	+345	-160	-107	+193	+ 92	+119	+597	-252	+368	-561	+151	- 95	+ 51	
13	- 59	-247	-116	- 68	-330	+ 45	+178	+434	+353	+279	- 18	-422	-493	-140	+125	- 62	+ 53	+ 59	+143	+ 39	- 68	-172	+ 53	- 42	- 20	
14	-148	+143	- 71	+ 65	+ 45	+ 42	+ 83	+154	+ 80	+ 77	+ 92	-137	-214	-148	-345	-116	+ 77	+ 21	+ 30	-110	+107	-285	+226	+ 33	- 12	
15	- 6	+ 36	- 9	-193	-125	- 30	0	+160	+151	-163	-193	-211	- 92	- 24	- 71	- 30	+ 65	+ 77	- 77	- 30	- 18	- 42	- 59	- 27	- 38	
16	+157	- 89	-178	- 98	+122	0	+107	+285	+383	-104	-330	-235	-214	+ 9	+ 33	+327	+217	- 45	+ 6	+270	+ 32	-345	+ 33	- 89	+ 13	
17	- 36	-315	+107	- 21	- 27	- 50	+ 39	+330	+368	-247	-249	-226	-208	- 89	+ 33	+ 33	- 24	0	- 27	- 30	+349	+231	..	..	..
18	..	..	..	..	..	..	..	..	+208	+252	+157	- 24	-208	-238	0	-122	-214	- 24	-104	+ 42	- 48	- 27	- 53	- 42	- 27	..
19	- 33	- 77	-137	+119	+ 27	+ 98	+ 38	+267	+ 95	- 24	+ 6	- 36	-146	-104	-154	- 53	+ 53	+330	- 68	- 92	- 56	- 86	-116	- 59	- 5	
20	- 74	- 59	- 89	+ 30	+ 30	- 6	+ 33	+166	+208	- 62	-154	-116	-148	-110	- 56	- 80	- 89	+107	+151	+169	- 21	+166	+ 92	-146	- 2	
21	X	- 74	- 98	- 45	- 24	- 9	- 30	- 39	+ 83	+148	+ 48	- 27	- 59	- 45	- 30	-226	-143	- 71	0	- 24	+ 30	- 18	- 71	+ 59	0	- 29
22	- 48	- 42	- 92	+ 18	0	-137	- 71	+ 77	+ 48	-146	- 89	- 6	+ 59	+ 86	- 77	+ 6	- 53	- 56	- 33	- 33	+ 77	..	..	..	..	..
23	..	..	..	..	..	..	..	..	+ 36	+ 83	+175	+ 92	+ 33	+ 30	+ 65	+ 50	- 59	+ 65	- 59	- 50	+181	+ 36	-148	- 98	- 92	..
24	- 65	- 71	- 62	- 30	- 9	0	- 36	- 71	-146	-178	- 74	+ 30	+131	+330	+107	- 56	- 86	-148	- 45	+ 86	+255	+ 74	-125	-116	- 13	
25	+ 59	- 30	- 24	- 42	- 59	-160	- 48	+ 9	- 33	+ 30	- 30	+ 12	- 27	+ 95	+ 18	- 62	- 18	- 24	- 30	- 24	+ 42	+ 71	+107	0	- 7	
26	- 27	-229	- 42	- 24	- 12	- 30	-101	-101	- 89	-116	+ 18	+125	+ 62	+ 30	+ 59	- 27	+ 30	+181	+ 15	- 62	- 48	- 36	- 9	- 62	- 23	
27	X	- 39	- 62	- 6	- 30	0	- 62	+ 48	+113	+ 95	0	0	- 27	-122	- 65	- 33	- 39	- 24	+ 24	+ 6	+ 27	- 18	- 21	- 48	- 14	
28	X	- 33	- 33	0	0	- 59	- 30	+ 33	+235	+294	+ 56	-119	-175	-255	-303	-116	+ 9	+ 53	+ 27	+ 27	- 15	- 59	- 59	0	+ 6	- 22
29	X	- 36	- 62	+ 6	- 6	+ 27	+ 30	+ 89	+362	+261	-104	-386	-392	-315	- 36	0	+ 30	+178	+131	+ 86	+ 33	+ 9	+ 30	+ 6	+ 18	- 2
30	0	-214	+ 92	+ 56	-143	- 36	+ 65	+356	+475	+119	- 30	-238	-371	-238	- 89	- 24	+ 77	- 21	- 77	- 36	- 15	+ 36	+ 59	- 36	- 10	
MEANS ALL DAYS		- 53	- 93	- 34	- 47	- 16	+ 7	+ 10	+181	+ 90	+ 38	- 61	- 49	- 96	-106	- 68	- 23	+ 30	+ 50	+ 56	+ 40	+ 38	- 72	+ 39	- 20	- 7
MEANS 10 DAYS		- 69	- 48	- 37	- 31	- 39	- 23	+ 13	+158	+105	- 14	- 89	- 62	-116	-142	-126	- 73	- 8	+ 59	+ 54	+ 32	+ 9	- 4	0	- 18	- 20

* = 10 LEAST DISTURBED DAYS

TABLE 135

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1935
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
MAY 1935

DAY	*	COMPONENT NORTHLY										LINE OM										LENGTH IN KMS										DIRECTION N 19.5° E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN															
1		- 83	- 44	0	- 66	- 83	+245	+717	+551	+415	-594	-612	-524	-546	-192	- 70	+122	+284	+441	+166	+240	- 57	-127	-157	-354	- 14															
2		- 35	- 52	- 13	-179	+ 9	+ 70	+179	+297	+ 87	-258	-476	-383	-233	-184	-127	-127	- 83	- 31	- 48	+ 26	+ 13	- 57	- 74	- 57	- 75															
3		- 79	+131	+135	+166	+267	+184	+367	+1180	+1267	+149	-140	-315	- 96	-262	-214	- 92	+ 9	+ 87	+ 26	- 44	- 39	-131	- 57	- 83	-107															
4	X	- 83	-118	- 13	+ 52	+ 52	+122	+218	+389	+315	+ 52	-149	-354	-551	-621	-354	-175	- 70	+157	0	- 26	- 61	- 70	- 61	- 87	- 60															
5	X	- 92	- 96	- 92	- 61	- 17	+ 9	+135	+328	+179	- 83	-302	-345	-288	-306	-262	-262	-131	+ 13	- 17	+ 17	- 87	- 57	- 79	- 52	- 81															
6		-109	-135	- 70	+ 48	+ 13	+ 17	+ 87	+214	+302	+ 92	- 70	-153	-302	-529	-524	-302	-131	-122	+ 26	- 87	- 92	-122	- 66	- 44	- 86															
7		- 13	- 79	- 87	-109	- 39	0	0	+170	+ 87	- 92	-245	-175	-131	-175	-118	-201	-135	- 44	+ 48	+ 4	- 48	- 96	+ 9	-131	- 71															
8	X	-157	-131	- 79	- 39	- 39	- 52	+ 44	+149	0	-271	-371	-297	- 70	+ 9	+ 17	- 52	-114	- 87	-127	- 79	- 32	- 87	- 57	- 92	- 86															
9	X	- 70	-135	- 13	0	- 39	- 39	0	+192	+249	- 87	-420	-559	-358	-197	- 79	+ 26	+ 52	+ 52	+135	+131	+166	- 9	- 22	-175	- 50															
10		-131	- 92	-122	- 44	+ 35	+ 87	+192	+306	+197	+218	-708	-708	-306	+114	+ 96	+131	+328	+332	+288	- 35	- 83	+ 17	- 39	-284	- 33															
11		-188	- 44	- 48	0	-131	+157	+218	0	0	-271	-336	-428	-315	-245	-135	-170	+236	+ 83	+ 83	+118	+166	+122	-118	-463	- 71															
12		+153	- 52	- 44	- 83	- 87	+ 44	+127	+275	- 39	-201	-393	-262	-306	-232	- 44	+223	-122	-105	-201	+ 31	- 39	+ 48	-127	+131	- 54															
13		-253	- 96	-555	+192	+ 87	0	+ 52	+ 48	- 39	-232	-476	-371	-389	-197	- 87	-135	+149	+ 70	+175	+201	0	- 39	0	-201	- 87															
14		- 31	+ 52	- 52	+245	+ 83	+192	+354	..	..	..	..	..	..	..	..	..	+ 35	0	- 92	- 83	- 87	- 87	- 61	- 44	..						
15		- 52	- 79	0	+ 48	- 22	+ 48	+201	+393	+310	-157	-533	-682	-559	-162	-227	+ 61	+280	+258	+131	-127	-166	-127	+ 87	+363	- 30															
16		+ 87	+ 48	-616	+529	+131	- 35	+245	+ 74	-179	-350	-507	-306	-223	-258	+ 96	+ 83	+127	+ 26	- 39	-135	-135	- 87	- 92	- 79	- 66															
17	X	- 83	- 79	- 39	- 31	- 22	+ 48	+218	+175	- 9	-275	-454	-446	-358	-214	-175	- 52	+ 79	+109	+ 13	- 44	- 13	- 83	-109	- 83	- 80															
18	X	- 44	- 70	- 48	- 26	+ 52	+122	+232	+297	-135	-415	-529	-599	-520	-267	+201	+227	+358	+262	+393	-114	- 22	- 39	+ 92	+ 35	- 23															
19		+ 61	+ 83	+122	+210	+175	+319	+175	+306	+223	- 79	-302	-306	-240	- 17	+ 35	+ 96	+131	+287	+ 52	+153	+961	-310	+188	+695	+125															
20		+651	-350	-446	- 39	-101	+101	+201	+ 70	- 61	-188	-485	-302	-105	-127	+ 9	- 70	- 92	- 79	+ 87	0	+ 48	+ 44	+ 96	- 35	- 49															
21		- 83	+ 26	+ 79	+ 9	+ 48	+ 66	+380	+848	+861	+791	-249	-144	-179	-179	-197	+127	+114	+ 57	- 31	0	+ 39	- 57	-262	+140	+ 92															
22		-131	-131	-127	- 35	- 96	+ 70	+105	- 87	- 13	-218	-411	-389	-315	-170	-166	0	+105	+131	+144	- 35	- 35	- 57	- 52	- 48	- 82															
23	X	-122	- 44	- 39	- 70	- 35	+ 26	+ 83	+144	+101	-262	-380	-468	-310	-122	-127	+ 79	+ 13	- 9	- 44	- 79	- 52	- 87	- 48	-127	- 82															
24	X	- 61	- 92	- 52	- 52	- 52	- 52	- 66	- 83	- 70	-275	-302	-175	+ 9	+ 17	0	-127	- 87	- 92	+ 9	- 92	- 83	- 44	-105	-122	- 85															
25	X	-127	- 79	- 52	+ 44	+ 35	+ 61	+ 96	-166	-371	-385	-315	-175	- 87	- 13	- 22	+ 66	- 39	0	0	- 35	- 83	+ 70	- 35	- 92	- 72															
26		-109	- 66	-114	0	+ 44	- 26	+253	+ 92	-197	-350	-341	- 52	- 48	- 22	-105	0	- 70	- 83	-175	-175	-210	-179	- 44	- 79	- 86															
27	X	-170	+ 9	+ 52	+288	-127	0	+170	- 44	-131	-236	-297	-258	-140	-214	+ 9	-131	+ 17	+ 35	- 87	- 79	- 87	- 61	-214	-131	- 78															
28		- 96	- 83	- 52	- 92	0	- 26	+214	+402	+135	-267	-503	-524	-437	-262	- 52	0	+ 48	+ 70	+ 44	- 26	- 66	0	+122	-105	- 65															
29		- 39	-131	+ 44	+ 17	+ 35	+ 44	+131	+253	- 9	-350	-481	-271	-118	-175	-197	- 83	-127	-114	- 35	- 87	- 87	- 57	-109	- 48	- 87															
30		-101	+175	-162	-564	-127	-131	+315	+118	-284	-559	-415	-275	- 52	- 83	-122	+ 87	+210	+135	+ 17	- 92	- 17	+105	+105	-240	- 82															
31		-197	- 52	- 57	- 87	- 35	+ 92	+140	+262	+197	-240	-485	-664	-507	-131	- 83	+166	+271	+131	+ 48	- 87	0	- 83	-184	- 87	- 70															
MEANS ALL DAYS		- 59	- 62	- 86	+ 1	- 2	+ 52	+181	+238	+113	-180	-409	-364	-272	-181	-101	- 16	+ 53	+ 65	+ 33	- 19	- 9	- 55	- 47	- 64	- 50															
MEANS 10 DAYS		- 95	- 91	- 54	- 18	- 2	+ 26	+121	+152	+ 6	-235	-356	-347	-258	-174	- 91	- 27	- 1	+ 32	+ 19	- 50	- 54	- 58	- 47	- 87	- 71															

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	* 	COMPONENT EASTWARD										LINE OW										LENGTH IN KMS										DIRECTION E 0°-5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		-30	0	+24	-62	-53	+30	+636	+74	+430	-220	-175	-169	-404	-45	+65	+255	+1025	+671	+368	+101	-169	-383	-205	-285	+64																
2		-42	-77	-92	-252	+53	+39	+166	+238	+89	-128	-163	-148	-92	-62	-56	-92	-95	-27	+12	-18	-89	0	-21	-39	-37																
3		-50	+27	0	+18	+86	-71	0	+125	+300	+238	+92	-86	-214	-151	-80	-62	-45	0	0	+12	+30	-62	-18	-30	+2																
4	X	-62	-42	+56	+89	+131	+86	+71	+208	+270	+238	+208	+30	-244	-312	-119	-148	-122	+65	-62	-24	0	-18	-6	-30	+11																
5	X	-36	-53	-30	-30	+9	0	+56	+202	+166	+116	-6	-42	-53	-89	-65	-146	-59	-18	-18	+42	-6	0	0	0	-2																
6		-45	-62	-42	+92	+24	-45	0	+137	+267	+229	+151	+119	-33	-208	-291	-211	-101	-119	+18	-53	-27	-62	0	+15	-10																
7		+24	-27	-30	-42	-24	-53	-33	+86	+33	-42	-116	+33	+98	+92	+146	-24	-59	-36	+6	+48	+53	-15	-18	-39	+2																
8	X	-56	-53	-21	0	-30	-30	-18	+48	-30	-151	-160	-122	+56	+163	+202	+119	+15	-27	-116	-30	-27	-36	-24	-33	-15																
9	X	0	-92	+27	+36	+12	-30	-86	+45	+172	+9	-107	-238	-146	+27	+86	+92	+36	+9	-36	+30	+33	-12	-27	-181	-14																
10		-143	-101	-143	-77	-56	-12	+137	+312	+294	+377	-683	-395	-178	+493	+241	+208	+624	+356	+238	+18	-288	+193	-116	-273	+43																
11		-154	-36	-89	+42	-83	-448	+128	+15	+36	-122	-45	-125	-169	-151	-62	-39	+291	+166	+330	0	+172	+199	-386	-327	-36																
12		+77	+15	-36	-36	-83	+62	+36	+143	+30	-45	-92	-9	-134	-86	+113	+264	-196	-98	-86	+148	+27	-30	+33	+187	+8																
13		-211	-89	-434	+68	0	-30	-56	+62	+98	+77	-86	-62	-342	-113	-71	+68	+104	+119	+71	+146	+21	+15	-56	-190	-37																
14		-18	-33	-74	+92	-27	-18	+89	+249	+410	+98	-128	-193	-223	-116	0	+27	+42	-9	-86	-45	-43	-56	-33	-27	-10																
15		-30	-71	-21	+12	-36	-24	+131	+249	+356	+39	-116	-241	-324	-36	-208	+134	+205	+92	+107	+48	-205	-122	-39	+134	+1																
16		+59	+45	-362	+238	+113	-125	+146	+157	-107	-146	-196	0	-83	-92	+208	+119	+143	-30	-62	-71	-45	0	-30	0	-10																
17	X	-30	-15	+23	+30	-9	0	+113	+122	+65	-71	-178	-196	-202	-30	-36	0	+92	+98	+30	-12	+89	-27	-27	-18	-7																
18	X	+15	0	+30	+33	+62	+62	+122	+285	+122	0	-110	-241	-359	-86	+238	+244	+327	+267	+264	-339	-205	-131	-24	-62	+21																
19		-48	-36	-89	+74	0	+59	-27	+122	+119	-39	-27	-154	-261	-131	-30	+62	+113	+312	+172	+178	+229	+146	+226	+383	+56																
20		+472	-42	-244	-33	-101	-113	-24	+244	-267	-143	-205	-33	+131	+74	+193	+148	-56	-178	-175	-148	-48	-68	-30	-62	-30																
21		-89	-45	-62	-89	-56	-110	+30	+18	-59	0	+9	+62	+36	-9	+30	+324	+92	+27	-59	-330	+148	+6	-356	+217	-11																
22		+15	+83	-89	-86	-45	+18	+77	-33	-36	-143	-247	-181	-86	+95	-68	+56	+119	+92	+154	-6	-24	-36	-27	-24	-18																
23	X	-104	+21	+65	-24	-27	-36	-6	+125	+143	-27	-89	-264	-181	+42	+9	+122	+56	+3	-36	-39	-6	-48	-27	-83	-17																
24	X	-24	-62	-30	-36	-24	-48	-92	-166	-65	-175	-148	-30	+122	+160	+119	0	0	-53	+15	-53	-65	-30	-86	-92	-36																
25	X	-116	-77	-62	+56	+53	+62	+9	-148	-223	-223	-148	+18	0	+98	+53	+163	+77	+56	0	+27	-56	+89	-56	+18	-14																
26		-30	-36	-89	+18	+98	-39	+42	-48	-143	-151	-48	+190	+151	+89	-89	+9	-12	+6	-59	-42	-95	-95	-27	-18	-17																
27		-113	+86	+33	+345	-59	-104	+33	-50	-48	-53	+62	-113	+53	-33	+166	-50	+30	+53	-65	-6	+9	-6	-166	-80	-3																
28		-62	-86	-42	-80	+9	-36	+95	+306	+181	-116	-220	-205	-122	-59	0	+18	+21	+80	+21	+6	-30	+92	+89	+48	-4																
29		+24	-59	+92	+56	+30	-30	+45	+202	-12	-146	-143	-24	0	-56	-89	+33	-74	-113	-27	-65	+80	-9	-101	-6	-16																
30		-116	+217	-151	+226	+1	0	+89	+56	-113	-229	-148	-104	+107	+65	-56	+104	+163	+92	+83	+27	+86	..	..	..	..												
31		..	..	..	..	..	..	..	+178	+205	+9	-80	-151	-300	-48	-71	+163	+226	+134	+92	+68	+48	+36	-39	-53	..									
MEANS ALL DAYS		-28	-32	-59	+16	-1	-34	+63	+115	+91	-25	-107	-97	-110	-18	+21	+58	+89	+61	+31	-16	-19	-17	-54	-31	-4																
MEANS 10 DAYS		-44	-41	-2	+17	+28	+3	+21	+67	+48	-44	-79	-90	-86	-6	+40	+46	+41	+41	-2	-44	-34	-31	-30	-50	-9																

* = 10 LEAST DISTURBED DAYS

JUNE 1935

JUNE 1935

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHLY										LINE		OM		LENGTH IN KMS										56.8										DIRECTION										N 19° 5' E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																											
1	X	-216	-130	-48	-82	+43	+78	+168	+328	+164	-177	-592	-661	-557	-350	-86	+138	+199	+181	-9	-134	-39	-78	-138	-112	-89																											
2	X	-216	-56	-86	0	-26	+95	+359	+367	+39	-527	-786	-652	-536	-212	-35	+147	+302	+212	+35	-91	-35	-112	-125	-130	-86																											
3		-56	-48	-69	-43	-30	+69	+268	+475	+302	-104	-575	-691	-566	-346	-177	+22	+177	+60	-86	-48	+48	+216	-86	-91	-58																											
4		-281	-168	-229	-65	-60	+285	+389	+609	+307	-302	-471	-566	-384	-259	-207	0	+22	-13	-203	-156	-82	+60	-147	-112	-85																											
5		-82	+125	-52	+121	-52	+151	+281	+350	+173	-307	-613	-518	-458	-216	-91	-13	-13	-60	-86	-39	+43	-69	+30	-26	-59																											
6		-216	-147	-13	-52	+86	+164	+156	+238	+177	-82	-467	-553	-514	-194	-320	+69	-43	+56	0	-91	-194	-91	0	+216	-76																											
7		-294	+130	-108	-99	+130	-363	-65	+298	+592	+423	-264	-393	-225	-164	-60	+488	+156	+372	+264	+540	-552	-510	+134	+117	+25																											
8		-372	-432	-65	+497	+194	+48	+78	-337	-43	-285	-190	-194	-112	-328	-259	-259	-52	+186	-194	-251	-125	-156	-238	-264	-131																											
9		-242	+367	+860	+596	+220	-39	+91	+251	-22	-523	-151	-125	-194	-151	+112	+168	+17	+78	-168	-207	-69	-99	-39	-264	+19																											
10		-151	-181	-251	+164	+294	+177	+242	-255	+186	-95	-302	-151	+95	+48	-86	+91	-52	+48	-43	-52	+207	+48	-78	-13	-5																											
11		-60	-43	-52	-26	-26	-168	-173	-138	+104	+30	-562	-410	-242	+78	-130	+168	+276	+151	-39	-91	-112	-82	-91	-30	-70																											
12		-86	-26	-35	-22	+13	+91	+173	+112	+121	+48	-696	-899	-562	-259	-26	+177	+518	+212	0	-207	+17	-48	-91	-99	-66																											
13		-69	-9	-324	+302	+156	+60	-43	+151	+238	+69	-410	-734	-683	-212	-138	+134	+259	+91	+9	-69	-238	-199	-130	-60	-77																											
14	X	-82	-181	-26	+48	+69	+43	+130	+65	+56	-78	-363	-644	-657	-380	-43	+56	+125	+143	+82	-91	-86	-104	-121	-86	-89																											
15	X	-86	-82	-39	-43	-22	0	+86	+186	+52	-264	-583	-389	-454	-432	-268	+13	+216	+307	+104	-86	-43	-91	-39	-43	-83																											
16	X	-78	-39	+9	+17	-82	+78	+255	+48	-82	-536	-773	-544	-384	-160	-78	+48	+259	+86	-17	+39	-17	-78	-134	-104	-94																											
17		-125	-125	-43	-441	-60	+91	+251	+462	+251	+138	-454	-592	-351	-645	-186	+69	+117	+82	+87	+139	+346	-143	-65	-130	-55																											
18		+48	-35	+9	-455	+52	+48	+113	+381	+619	-30	-303	-351	-325	-61	-69	+186	+178	+95	0	-416	-502	-52	-229	-65	-48																											
19		-247	-165	-69	+78	+199	+160	+307	+372	+95	-78	-221	-680	-615	-606	-126	+22	+242	+320	+186	-82	+165	-385	+104	+35	-21																											
20		-303	-242	-39	-134	-82	-43	+221	+299	+303	-264	-602	-684	-455	-251	-56	0	+463	+87	-26	-195	-212	-108	-78	-78	-103																											
21	X	-95	-117	-78	-91	-56	+65	+225	+390	+104	-273	-485	-684	-338	-134	+61	+147	+134	0	-91	-78	+26	-173	-221	-91	-77																											
22		-39	-78	-69	-87	-87	+13	+134	+303	+169	-251	-554	-554	-346	-212	-130	-48	-130	-156	+17	-43	-35	-87	-91	-13	-99																											
23		-48	-87	+48	-35	-17	+26	+216	+225	+91	-130	-221	-390	-554	-338	-182	-82	-56	-39	-48	-52	-87	-182	-78	-104	-88																											
24	X	-69	-43	0	-13	-9	+35	+139	+242	+121	-139	-312	-385	-294	-312	-173	+22	0	-126	-130	-143	-126	-130	-52	-61	-82																											
25	X	-87	-78	-26	-9	+69	+78	+39	-13	-182	-342	-524	-520	-455	-134	+17	+156	+169	+173	+48	-169	-121	-78	-69	-13	-86																											
26	X	-17	-39	+43	+91	+43	0	+130	+130	-17	-316	-758	-585	-442	-134	+178	+87	-9	+43	+78	-104	-169	-121	-30	+43	-78																											
27	X	-95	-134	-39	0	0	+52	+91	+242	+100	-342	-883	-688	-390	0	+242	+113	+13	+82	-100	-35	-126	-78	0	0	-82																											
28		-238	-48	+13	+9	-39	+368	+78	+204	+31	-216	-394	-485	-260	-186	+39	+61	+338	+204	+22	-134	-30	-281	-216	-251	-56																											
29		-255	-186	-43	-69	-143	+78	+208	+407	+407	+17	-485	-775	-407	-126	+134	-43	+130	+39	+52	+91	-264	-281	-281	+26	-74																											
30		-216	-69	-82	-35	+43	-35	+247	+260	+100	-368	-818	-641	-91	-91	+52	+152	+173	+78	-169	+43	-82	-113	-186	-130	-82																											
MEANS ALL DAYS		-146	-77	-30	+4	+27	+57	+160	+222	+154	-177	-494	-538	-392	-227	-70	+76	+138	+100	-14	-74	-83	-120	-93	-64	-69																											
MEANS 10 DAYS		-104	-90	-29	-8	+3	+52	+162	+138	+36	-290	-606	-575	-451	-228	-18	+93	+141	+110	0	-89	-74	-104	-93	-60	-85																											

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										E 0° .5 N	MEAN
		EASTWARD					LINE ON																										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1	X	- 86	- 62	- 32	- 50	+ 62	- 24	+ 32	+ 230	+ 295	+ 130	- 192	- 384	- 330	- 236	- 65	+ 100	+ 148	+ 148	+ 21	- 41	+ 44	+ 27	- 35	- 24	- 14							
2	X	- 174	- 9	- 41	+ 6	- 32	- 32	+ 177	+ 330	+ 83	- 260	- 322	- 239	- 271	- 112	- 30	+ 133	+ 209	+ 150	+ 83	+ 18	+ 53	- 9	- 30	- 30	- 15							
3		- 27	0	+ 18	- 27	- 59	- 38	+ 62	+ 280	+ 360	+ 91	- 177	- 322	- 304	- 150	- 77	+ 30	+ 148	+ 18	- 115	+ 71	+ 121	+ 268	- 32	- 30	+ 5							
4		- 221	- 109	- 192	+ 24	- 86	+ 50	+ 38	+ 372	+ 239	- 30	+ 50	- 83	+ 21	- 62	- 254	- 21	- 21	- 30	- 174	- 44	+ 15	+ 100	- 106	- 18	- 23							
5		- 41	+ 224	- 12	+ 189	+ 15	+ 50	+ 142	+ 274	+ 233	- 148	- 392	- 263	- 221	- 6	+ 71	+ 53	+ 47	- 59	- 100	+ 71	+ 88	0	+ 24	+ 12	+ 10							
6		- 192	- 68	- 6	- 59	+ 112	+ 86	- 30	+ 159	+ 177	+ 47	- 165	- 165	- 230	+ 56	- 130	+ 209	- 41	+ 27	+ 6	- 77	- 136	- 86	0	+ 94	- 17							
7		- 366	+ 354	- 21	- 41	+ 27	- 584	- 209	+ 86	+ 475	+ 705	+ 162	- 9	+ 6	+ 251	+ 469	+ 938	+ 124	+ 569	+ 437	+ 389	- 646	- 678	+ 165	- 74	+ 105							
8		- 298	- 180	- 266	+ 304	+ 215	+ 204	+ 27	- 596	- 268	- 310	+ 74	+ 136	+ 230	- 62	- 30	- 115	+ 136	+ 283	- 162	- 274	- 156	- 133	- 224	- 363	- 76							
9		- 307	..	..	..	..	..	..	+ 74	+ 215	- 298	- 74	+ 386	- 62	+ 59	+ 404	+ 354	- 47	+ 195	- 97	- 142	- 100	0	+ 142	- 115	..		
10		- 41	- 236	- 251	+ 133	+ 239	+ 88	+ 354	- 6	+ 100	- 248	- 159	+ 103	+ 139	- 62	- 47	+ 201	+ 56	+ 864	- 24	- 24	+ 266	+ 32	- 24	+ 27	+ 62							
11		- 6	- 6	- 35	+ 18	- 9	- 115	- 584	- 233	+ 206	- 50	- 136	+ 53	- 59	+ 189	- 59	+ 165	+ 354	+ 106	- 30	- 30	- 53	- 53	- 59	0	- 18							
12		- 59	- 32	+ 12	- 18	- 44	+ 27	+ 91	+ 162	+ 271	+ 192	- 451	- 575	- 413	- 148	- 27	+ 153	+ 425	+ 248	+ 27	- 206	- 103	+ 62	- 27	- 65	- 21							
13		- 56	- 27	- 295	+ 257	+ 106	+ 86	0	+ 115	+ 150	+ 115	- 97	- 286	- 389	- 30	+ 47	+ 319	+ 336	- 177	+ 148	- 86	- 153	- 133	- 59	0	5							
14	X	+ 6	- 115	+ 9	+ 83	+ 88	- 12	- 30	+ 24	+ 94	+ 62	- 103	- 280	- 342	- 165	+ 139	+ 142	+ 133	+ 77	+ 47	- 36	0	- 9	- 30	- 27	- 10							
15	X	- 6	- 9	- 6	- 3	+ 9	+ 27	+ 24	+ 86	0	- 136	- 230	- 12	- 59	- 177	- 118	- 6	+ 145	+ 209	+ 71	- 56	- 6	- 53	+ 32	- 24	- 12							
16	X	- 24	0	+ 24	+ 24	- 56	- 24	+ 62	+ 88	- 32	- 445	- 531	- 230	- 56	+ 74	+ 50	+ 18	+ 150	+ 21	+ 35	- 9	+ 71	+ 6	- 41	- 27	- 36							
17		- 68	- 121	- 68	+ 88	- 86	- 24	+ 15	+ 215	+ 74	- 91	- 121	- 56	+ 240	- 133	+ 222	+ 83	+ 6	+ 56	0	+ 379	+ 373	- 740	+ 367	- 89	+ 22							
18		- 332	+ 281	+ 121	- 480	+ 104	- 231	- 36	+ 266	+ 556	+ 139	+ 207	+ 361	+ 346	+ 260	+ 136	+ 352	+ 124	+ 65	- 213	- 367	- 474	- 148	- 189	- 74	+ 32							
19		- 255	- 207	- 83	0	- 77	- 151	+ 305	+ 172	+ 207	+ 92	+ 332	- 71	- 355	- 429	+ 50	0	+ 216	+ 373	+ 299	- 89	- 246	- 130	+ 255	+ 9	+ 9							
20		- 177	- 189	+ 177	- 36	- 71	- 127	+ 68	+ 216	+ 329	- 44	- 266	- 266	- 284	- 89	+ 56	+ 53	+ 509	- 74	- 30	- 151	- 121	- 59	- 83	- 18	- 28							
21	X	- 50	- 59	- 71	- 112	- 71	- 41	+ 118	+ 240	+ 148	- 47	- 148	- 269	- 145	- 33	+ 154	+ 243	+ 148	0	- 47	- 33	+ 21	- 30	- 180	- 27	- 12							
22		- 47	- 27	0	- 62	- 127	- 107	+ 18	+ 166	+ 142	0	- 115	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	+ 266	+ 148	+ 92	- 9	- 92	- 240	- 145	- 27	- 65	- 89	- 33	- 24	- 18	- 92	- 59	- 9	- 53	..		
24	X	- 27	- 33	+ 24	0	- 33	- 27	+ 92	+ 216	+ 151	+ 47	- 56	- 71	- 77	- 145	- 33	+ 89	+ 83	- 47	- 68	- 86	- 65	- 83	- 3	- 27	- 7							
25	X	- 65	- 30	+ 9	+ 30	+ 41	- 38	- 62	+ 53	- 62	- 121	- 177	- 154	- 145	- 30	+ 30	+ 154	+ 142	+ 237	+ 92	- 92	- 41	- 6	- 9	+ 33	- 9							
26	X	+ 21	- 80	+ 104	+ 130	+ 59	- 33	+ 118	+ 169	+ 24	- 255	- 533	- 346	- 207	+ 53	+ 246	+ 166	+ 74	+ 50	+ 192	+ 56	- 136	- 89	- 18	0	- 10							
27	X	- 65	- 89	0	+ 6	- 33	- 9	+ 53	+ 178	+ 92	- 148	- 539	- 500	- 269	+ 36	+ 308	+ 222	+ 121	+ 112	0	+ 36	+ 15	+ 27	- 15	+ 56	- 17							
28		- 278	+ 33	+ 56	+ 41	- 27	+ 178	+ 47	+ 130	+ 151	- 59	- 41	- 118	- 30	- 101	+ 201	+ 234	+ 408	+ 151	+ 33	+ 71	+ 50	- 207	- 136	- 133	+ 27							
29		- 178	- 175	- 33	- 30	- 89	- 74	+ 47	+ 237	+ 275	+ 151	- 95	- 349	- 163	- 33	+ 334	- 12	+ 207	+ 47	+ 112	+ 219	- 263	- 115	- 222	+ 112	- 4							
30		- 115	- 15	- 36	- 41	+ 15	- 59	+ 118	+ 281	+ 154	- 198	- 438	- 175	+ 136	+ 89	+ 83	+ 166	+ 121	+ 36	- 169	- 47	+ 36	- 59	- 101	- 71	- 12							
MEANS ALL DAYS		- 118	- 36	- 33	+ 16	+ 12	- 31	+ 38	+ 139	+ 166	- 30	- 168	- 169	- 120	- 44	+ 64	+ 151	+ 167	+ 128	+ 17	- 16	- 54	- 85	- 29	- 29	- 3							
MEANS 10 DAYS		- 47	- 49	+ 2	+ 11	+ 3	- 21	+ 58	+ 161	+ 79	- 117	- 283	- 248	- 190	- 74	+ 68	+ 126	+ 135	+ 96	+ 43	- 24	- 4	- 22	- 33	- 10	- 14							
		* = 10 LEAST DISTURBED DAYS																															

= 10 LEAST DISTURBED DAYS

TABLE 139

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1935

JULY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LINE OM		LENGTH IN KMS										DIRECTION N 19°.5 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	-137	-69	+34	+21	+69	0	+86	+236	+249	+43	-536	-725	-549	-257	-184	+51	+219	+154	+82	-137	+129	-99	-266	-257	-74					
2	X	-154	-129	-124	-60	-34	+13	+335	+86	+219	-82	-317	-549	-558	-270	-120	+133	+69	+86	-51	-219	-133	-94	-103	-163	-92					
3	X	-133	-94	-90	-64	+86	+43	+206	+275	+172	-133	-768	-991	-776	-369	+129	+309	+292	+176	+43	-129	-82	-39	-103	-146	-91					
4	X	-51	-47	-167	-163	+34	+60	+249	+395	+257	-245	-686	-772	-652	-468	+26	+197	+219	+206	-9	-86	-77	-82	-64	-82	-84					
5	X	-124	-124	-94	-90	-69	-47	+129	+279	+240	-47	-395	-644	-721	-438	-189	+103	+94	+210	+90	-82	0	-90	-124	-90	-93					
6	X	-94	-129	-103	-90	-51	-34	+124	+386	+343	-13	-420	-635	-639	-476	-253	0	+163	+90	-13	-69	-26	+56	-13	-51	-81					
7		-124	-202	-129	-60	-90	0	+51	+121	+191	+257	+360	+39	-347	-686	-734	-468	-317	+305	+129	+86	-99	-159	-160	-170	..					
8		..	..	..	..	..	..	..	..	..	-60	-340	-563	-602	-563	-327	-112	-39	0	-198	-43	-215	-86	-13	-43	..
9		-13	-60	-95	+22	+198	-43	+168	+344	-499	-542	-718	-520	-301	-129	-69	+245	+452	+103	-125	-206	-129	-90	-43	-142	-91					
10		+39	-82	-47	-43	-43	+13	+125	+258	+90	-108	-206	-439	-512	-430	-172	-82	+95	-103	-176	-69	-129	-90	-86	-138	-97					
11		-56	-318	+374	+198	+163	-60	+86	+155	-181	-641	-778	-572	-224	+22	+129	+125	+69	-95	-69	-95	+120	-22	+133	-181	-72					
12	X	+34	+13	-26	+9	-17	+39	+146	+125	-9	-198	-421	-456	-507	-254	-43	+112	+258	+168	-22	-47	-39	-95	-34	-30	-54					
13	X	-211	0	-60	-43	-69	+86	+120	+258	+47	+469	-796	-563	-447	-224	-56	+34	+236	+464	+43	+82	-9	-52	0	-64	-31					
14		+56	+43	+9	-17	+60	+90	+133	+108	-194	-254	-387	-452	-35	-297	-86	-26	+262	..	..	..	..	..	..	..	..
15		..	..	..	..	..	..	..	+305	-64	-645	-559	-271	-129	0	+206	+353	+120	+142	-56	-90	-82	-172	-73	-9	..
16	X	-249	-236	-17	-13	-13	+64	+163	+456	+490	-64	-473	-507	-499	-520	-301	-168	+77	+17	0	-86	-69	-86	-82	-133	-94					
17		-90	-125	-52	-86	-13	0	+198	+262	+262	+43	-378	-598	-645	+9	-138	-95	+52	+499	..	..	..	..	..	..	..
18		+215	+206	+155	+206	+228	+310	+529	+735	+559	+176	-224	-563	-692	-679	..	+9	+391	..	..	..	..	+391	+288	+17	..	
19		+39	-125	0	-39	+43	-13	+310	+473	+512	-13	-357	-598	-494	-477	-383	-129	+73	+391	+593	+340	+469	+417	+434	+357	+76					
20		+301	+297	+267	+301	+408	+344	+555	+654	+675	+262	-194	-275	-314	-340	-129	+155	+99	+103	+133	+90	+43	-9	+47	+129	+150					
21		-103	+17	+34	+47	+90	+185	+391	+301	+142	-116	-236	-262	-39	-258	-163	-112	-64	-150	-280	-9	-125	+181	+482	-301	-14					
22		+232	+258	-86	-181	-77	-17	+129	+267	+77	+108	-249	-443	-322	-301	-340	+86	+146	+64	-90	-94	+69	+219	-77	-202	-35					
23		-52	-60	-39	-69	+34	-267	+400	+189	+206	+120	-194	-383	-202	-77	0	-108	-181	-103	-129	-82	-129	+133	-129	-172	-54					
24		-64	-658	+546	+361	+86	+120	-327	+93	0	-99	-39	-43	-348	-271	+86	+602	-123	-95	+499	-628	+366	+791	-757	+912	+42					
25		-568	+628	-64	-692	+194	-39	+301	+108	-408	-275	-103	-138	-43	-275	+34	+305	+163	-90	+39	-172	-64	-215	-172	-138	-70					
26		-129	-133	-133	-39	-34	+9	+211	+86	-112	-396	-520	-396	-383	-129	+159	0	-26	-86	-99	+77	+52	-172	-168	-129	-104					
27		-90	+30	0	+129	+232	+219	+477	+568	+606	-123	-439	-383	-439	-357	+232	+344	+284	0	-30	+47	+215	+86	+52	0	+69					
28		..	..	..	..	..	..	..	..	..	..	..	..	..	..	-21	+13	+123	+90	+60	..	..	..	..	..	..
29		..	..	..	..	..	..	..	+300	+9	-463	-502	-506	-184	-64	..	..	..	..	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	+266	+206	-64	-347	-466	-399	-420	-300	-124	-17	+64	+43	+9	-47	-107	-51	-56	..
31		-77	-90	-51	+56	+146	+56	+343	+313	+180	-227	-515	-652	-403	-219	-129	-223	+163	+305	..	..	..	-90	-69	-133	..		
MEANS ALL DAYS		-75	-49	+5	-24	+59	+32	+209	+288	+148	-100	-421	-490	-427	-300	-77	+105	+124	+72	+20	-75	+22	+31	-51	-49	-43					
MEANS 10 DAYS		-124	-91	-72	-55	-7	+25	+173	+284	+223	-30	-535	-649	-594	-364	-110	+86	+181	+175	+18	-86	-34	-65	-88	-113	-77					

* = 9 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE OW										LENGTH IN KMS										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1	X	- 89	- 62	+ 12	+ 36	0	- 44	- 59	+219	+142	+ 56	-246	-255	-181	+ 65	+ 41	+101	+145	+189	+ 89	+ 36	-127	- 77	- 9	-145	- 10																
2	X	-130	- 24	- 33	- 38	- 27	- 24	+189	+112	+115	+ 47	0	-136	-189	- 21	+ 36	+184	+ 83	+ 98	- 95	-148	- 56	- 62	- 36	-104	- 11																
3	X	- 65	- 44	- 83	- 30	+ 71	- 6	+ 77	+219	+210	- 50	-352	-503	-408	-189	+118	+266	+252	+172	+101	- 74	+ 15	+ 18	- 62	- 86	- 19																
4	X	+ 24	- 6	-118	-118	+ 27	- 9	+ 89	+358	+296	- 71	-272	-222	-228	-222	+ 56	+151	+112	+ 98	0	- 33	- 15	- 30	0	+ 18	- 5																
5	X	- 30	- 36	- 27	0	- 30	-127	- 47	+104	+290	+178	- 47	-240	-361	-195	0	+142	+ 33	+145	+ 47	- 24	+ 27	- 30	- 41	0	- 21																
6	X	- 53	- 86	- 12	- 33	- 36	- 59	+ 24	+237	+243	+ 24	- 59	-172	-237	-216	- 21	- 30	+ 80	+ 30	- 47	- 95	-12	+ 62	+ 6	+ 6	- 19																
7		- 21	-112	- 77	- 36	- 59	- 62	- 27	+ 33	+ 95	+154	+281	+154	- 59	-272	-447	-249	-151	+613	+ 77	- 44	-175	-101	-115	-184	- 33																
8		+ 83	+784	+861	+799	+151	+112	+121	+ 89	+ 36	+ 32	-114	-134	-158	-251	-143	- 44	-131	-102	-152	+ 47	-102	+ 82	+ 32	0	+ 79																
9		+ 29	- 47	- 58	+ 47	+117	+ 38	+131	+310	+201	-359	-400	-207	- 64	+ 38	+ 58	+365	+558	+207	- 76	-111	-131	- 88	- 18	-143	+ 17																
10		0	- 9	- 23	- 29	- 12	..	..	+190	+ 96	- 26	+ 23	- 85	-193	..	..	..	..	..	..	..	..	..	..	..	..				
11		..	..	..	..	..	..	..	..	+ 35	-336	-485	-292	- 85	+ 32	+146	+207	+175	+ 32	- 58	-149	+134	- 29	+ 88	-166	..								
12	X	0	- 12	- 29	0	- 47	- 44	+ 76	+ 58	+ 53	- 9	-120	-210	-228	- 99	- 32	+143	+277	+149	- 23	- 38	- 26	- 70	- 18	- 88	- 14																
13	X	-114	+ 53	- 35	0	- 26	0	- 9	+158	+ 58	-216	-444	-307	-155	- 47	+ 96	+117	+234	+409	- 6	- 91	- 9	- 53	+ 41	- 47	- 16																
14		- 61	- 35	+ 53	0	- 12	- 18	- 35	- 9	-277	-234	-149	-204	+114	- 67	+ 35	+117	+368	+ 94	0	- 26	- 3	- 47	- 23	- 23	- 18																
15		- 58	+ 20	- 6	+ 9	+ 67	+ 32	- 29	+234	- 29	-324	-283	-120	- 41	+140	+388	+426	+137	+155	-123	- 15	+ 9	- 93	- 6	+ 23	+ 25																
16	X	-155	-187	0	+ 6	- 6	- 15	0	+289	+435	0	-237	-152	- 58	-120	- 73	- 55	+ 26	- 73	- 61	- 53	+ 6	- 23	- 47	- 88	- 27																
17		- 23	- 58	- 26	- 32	+ 12	- 91	- 6	+ 93	+172	+105	-111	-228	-271	-152	- 61	+ 29	+ 61	+228	..	..	..	..	..	..	..									
18		..	..	..	..	..	..	..	+388	+339	+228	+ 61	-234	-353	-450	-260	-146	+ 70	..	..	..	+251	+187	+ 6	..	..														
19		+117	- 9	+ 32	- 9	+ 35	+143	+251	+356	+447	+120	-178	-260	-164	-114	+ 6	+146	+146	+143	+140	- 53	+114	+ 32	+164	+ 96	+ 71																
20		+117	+120	+128	- 23	+181	+ 73	+ 85	+324	+523	+272	+228	+ 82	+263	..	..	..	..	..	..	..	..	..	..	..	..				
21		..	..	..	..	..	..	..	+199	+ 70	- 26	+ 29	- 15	+266	- 9	+ 9	+ 32	+ 73	-120	-321	0	- 58	+161	+499	-137	..									
22		+146	+347	+368	- 88	- 88	- 32	- 15	+149	+111	+418	+187	- 99	- 91	- 55	-187	..	..	..	..	..	..	..	..	..	..						
23		..	..	..	..	..	..	..	+187	+248	+155	+ 12	+ 35	+ 35	+146	+231	+ 32	..	..	..	..	..	..	..	..	..							
24		..	..	..	..	..	..	..	- 29	+ 35	+111	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
25		..	..	..	..	..	..	..	+ 91	-310	-128	- 61	+108	-248	- 91	+ 70	+368	+222	- 26	..	..	..	..	..	..	..									
26		..	..	..	..	..	..	..	+164	+ 18	-158	..	..	..	..	..	..	..	..	..	..	+228	+ 58	- 85	- 32	..
27		+ 18	+ 38	+ 29	+134	+175	+213	+315	+971	..	+ 73	- 44	- 9	+ 73	..	..	..	..	..	..	..	..	..	..	..	..				
28		..	..	..	..	..	..	..	+356	+300	+ 13	+ 73	- 35	- 35	+ 32	+ 25	- 19	+ 66	+ 25	-104	- 47	+ 98	+152	+136	+379	..									
29		+120	+ 13	-205	+ 32	- 6	- 44	+120	+284	+ 73	-240	-202	+246	+ 32	+152	..	..	..	..	..	..	..	..	..	..	..					
30		..	..	..	..	..	..	..	+215	+183	+ 98	-111	-152	-123	-177	-190	+ 28	+ 63	..	..	+ 38	+ 35	- 25	- 28	- 32	..							
31		- 63	- 28	- 9	+114	+ 63	0	+190	+284	+221	+ 70	-123	+ 13	-212	- 79	+ 28	..	+569	+386	..	..	..	+ 47	- 32	-199	..													
MEANS ALL DAYS		- 35	+ 13	+ 32	+ 42	+ 15	- 6	+ 50	+184	+154	- 43	-175	-198	-156	-105	+ 8	+119	+145	+155	- 9	- 53	- 34	- 32	- 9	- 51	+ 1																
MEANS 10 DAYS		- 68	- 45	- 36	- 20	- 8	- 36	+ 38	+195	+205	- 5	-197	-244	-227	-116	+ 25	+113	+138	+135	+ 1	- 66	- 25	- 29	- 18	- 59	- 15																

* = 9 LEAST DISTURBED DAYS

TABLE 141
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

AUGUST 1935

AUGUST 1935

DAY	*	COMPONENT NORTHWARD										LENGTH IN KMS										DIRECTION N 19° 5' E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+ 30	+ 13	+ 17	- 47	+ 77	+ 206	+ 163	+ 163	+ 129	- 69	- 22	+ 34	+ 95	+ 120	- 56	- 469	- 206	- 43	+ 26	+ 168	+ 82	- '9	+ 9	+ 13	+ 18					
2		- 82	- 26	- 9	- 47	+ 133	+ 181	- 26	+ 120	+ 13	- 185	- 297	- 288	- 219	- 103	+ 120	+ 125	+ 47	- 56	- 90	- 77	- 95	- 125	- 125	- 95	- 50					
3		- 52	- 69	- 52	- 17	+ 86	+ 34	+ 249	+ 267	+ 271	- 52	- 172	- 473	- 598	- 430	- 215	- 138	+ 13	- 39	- 43	- 90	- 43	- 52	+ 22	- 125	- 72					
4		- 52	- 112	- 198	- 9	0	+ 77	+ 215	+ 327	+ 125	- 314	- 611	- 550	- 443	- 181	- 47	+ 47	+ 17	0	+ 13	- 39	- 99	- 116	- 43	- 9	- 83					
5		- 39	- 34	- 138	- 69	+ 43	+ 77	+ 168	+ 378	+ 267	- 267	- 335	- 301	- 224	- 258	- 301	- 133	- 141	+ 64	- 254	- 52	- 52	+ 26	+ 43	- 69	- 71					
6		- 90	- 108	- 69	+ 103	+ 22	+ 95	+ 133	- 73	- 301	- 318	- 224	- 224	- 155	- 77	+ 52	- 370	- 60	+ 52	- 249	- 26	- 69	- 60	- 47	- 52	- 88					
7		- 43	- 60	- 112	- 30	+ 43	+ 86	+ 82	- 47	+ 64	- 224	- 249	- 69	- 168	+ 13	+ 120	- 30	- 26	- 112	- 99	- 52	+ 13	+ 17	- 86	- 9	- 41					
8	X	- 9	- 17	- 82	- 52	- 52	- 35	+ 254	+ 258	+ 215	- 224	- 301	- 538	- 598	- 318	- 99	+ 189	0	- 133	- 99	- 125	+ 39	+ 112	+ 47	- 52	- 70					
9	X	- 82	- 73	- 176	- 22	- 56	+ 30	+ 215	+ 464	+ 215	- 176	- 464	- 473	- 353	- 297	- 185	+ 39	- 30	- 43	- 168	- 69	- 69	- 86	- 90	+ 34	- 80					
10	X	- 47	- 82	+ 86	+ 47	+ 69	+ 34	+ 215	+ 241	+ 150	- 322	- 430	- 507	- 602	- 335	- 129	+ 17	+ 163	+ 103	- 168	- 133	- 86	- 95	- 39	- 39	- 79					
11	X	+ 43	+ 39	+ 129	- 82	- 30	+ 34	+ 241	+ 430	+ 134	- 619	- 688	- 490	- 357	- 163	- 43	+ 129	+ 142	+ 34	- 82	- 129	- 77	- 95	- 69	- 95	- 67					
12		+ 43	- 26	- 77	+ 69	- 13	+ 47	+ 146	+ 344	+ 43	- 727	- 894	- 611	- 473	- 112	+ 103	+ 241	+ 176	+ 43	- 86	..	..	..	..	..	..
13		- 13	- 39	+ 112	- 43	+ 90	+ 34	+ 258	+ 512	+ 224	- 447	- 602	- 559	- 348	- 26	+ 142	+ 103	+ 245	- 34	- 163	- 172	- 82	- 125	- 82	- 43	- 44					
14		- 90	- 116	- 13	0	+ 43	+ 103	+ 430	+ 559	+ 262	- 185	- 555	- 950	- 924	- 434	+ 43	+ 155	+ 189	+ 249	+ 163	+ 120	+ 125	+ 43	+ 69	+ 77	- 27					
15	X	+ 82	+ 22	+ 90	+ 168	+ 95	+ 129	+ 391	+ 899	+ 249	- 421	- 512	- 550	- 417	- 430	- 206	+ 176	- 43	- 43	+ 52	+ 13	- 116	- 39	- 56	- 52	- 22					
16	X	- 47	+ 69	+ 22	+ 198	- 138	+ 176	+ 469	+ 507	+ 232	- 473	- 770	- 804	- 559	+ 17	+ 26	- 26	+ 34	+ 120	- 47	- 69	+ 22	- 9	- 64	- 60	- 49					
17	X	- 133	- 86	- 95	- 86	- 52	+ 26	+ 301	+ 550	+ 271	- 366	- 735	- 688	- 520	- 228	+ 34	+ 77	+ 43	0	- 69	- 95	- 69	- 9	+ 69	- 43	- 79					
18	X	- 112	- 47	- 86	- 47	+ 52	+ 120	+ 254	+ 387	+ 525	+ 43	- 344	- 516	- 615	- 516	- 327	- 241	- 194	- 103	- 9	- 69	- 43	- 26	- 215	- 155	- 95					
19		- 43	+ 30	- 34	+ 95	+ 39	+ 318	+ 30	- 43	0	- 60	- 215	- 520	- 559	- 267	+ 176	+ 56	- 77	+ 168	+ 258	- 24	+ 47	+ 77	+ 310	- 181	- 13					
20		- 224	+ 232	- 348	- 434	- 120	- 77	+ 129	+ 168	+ 77	- 353	- 452	- 370	- 378	- 215	- 82	- 26	+ 30	+ 30	+ 120	- 30	+ 176	- 9	- 249	+ 387	- 82					
21		+ 172	+ 271	- 112	- 47	- 258	- 108	+ 47	- 52	- 77	- 512	- 473	- 366	- 176	- 77	- 90	+ 129	- 9	+ 116	- 292	- 133	- 82	- 86	- 39	0	- 94					
22		- 47	+ 52	- 589	+ 327	- 34	- 340	+ 90	+ 215	+ 176	- 56	- 168	- 172	- 224	+ 43	+ 52	- 99	+ 232	- 52	- 43	- 262	- 103	- 181	- 95	- 86	- 57					
23		- 172	- 366	+ 254	+ 172	- 219	+ 176	+ 249	+ 241	+ 26	- 486	- 499	- 301	- 82	- 34	+ 129	+ 258	+ 228	+ 73	- 52	- 69	- 56	- 77	0	+ 34	- 24					
24		- 17	- 47	+ 103	+ 391	+ 163	+ 103	+ 224	+ 391	+ 112	- 249	- 387	- 267	- 284	- 155	- 39	- 133	+ 43	+ 378	+ 271	+ 602	+ 284	+ 120	+ 280	- 271	+ 67					
25	X	- 26	+ 301	+ 69	+ 155	+ 176	+ 138	+ 439	+ 452	+ 206	- 90	- 452	- 176	- 47	+ 86	- 34	0	+ 26	- 125	- 134	- 53	+ 60	+ 262	+ 129	- 17	+ 56					
26		+ 26	- 34	+ 9	- 86	- 17	+ 47	+ 262	+ 400	+ 176	- 86	- 189	- 69	- 172	+ 47	+ 133	+ 267	..	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	+ 473	+ 176	- 258	- 800	- 877	- 249	- 778	+ 232	+ 331	+ 464	+ 288	- 82	0	- 39	- 176	- 120	+ 90	..
28		0	+ 26	- 30	+ 60	+ 43	+ 120	+ 538	+ 658	+ 206	- 602	- 817	- 580	- 439	- 26	+ 206	+ 215	+ 172	+ 90	+ 181	+ 507	+ 305	- 211	0	+ 224	+ 35					
29	X	+ 150	- 112	- 9	- 33	+ 9	+ 86	+ 490	+ 520	+ 120	- 391	- 778	- 735	- 512	- 219	- 43	- 52	+ 168	+ 275	+ 77	- 82	+ 9	+ 39	- 52	- 47	- 47					
30		- 211	0	+ 52	+ 13	- 52	+ 43	+ 219	+ 477	+ 353	- 150	- 387	- 563	- 611	- 426	- 146	- 125	- 22	+ 64	+ 22	+ 245	+ 172	+ 129	- 9	- 155	- 44					
31		- 507	+ 90	- 43	+ 56	- 120	+ 47	+ 241	+ 516	+ 254	- 86	- 593	- 920	- 856	- 383	- 69	+ 181	+ 516	+ 649	- 43	+ 417	..	..	..	..	..
MEANS ALL DAYS		- 43	- 10	- 45	+ 24	+ 6	+ 69	+ 242	+ 332	+ 159	- 280	- 442	- 444	- 382	- 183	- 35	- 5	+ 35	+ 40	- 35	- 8	+ 7	- 24	- 14	- 33	- 44					
MEANS 10 DAYS		- 18	+ 1	- 5	+ 24	+ 6	+ 74	+ 327	+ 471	+ 238	- 304	- 547	- 548	- 458	- 240	- 101	+ 31	+ 31	+ 8	- 71	- 81	- 33	+ 8	- 34	- 53	- 53					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION										E 0° .5 N	MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1		+ 19	0	+ 38	- 28	+ 9	+ 34	+ 94	- 19	0	- 19	+216	+244	+275	+372	+225	-247	-203	+376	+188	+ 97	+ 88	+ 66	+ 50	+ 63	+ 81							
2		- 34	+ 28	+ 28	+ 31	+188	+194	+ 9	+153	+ 94	+ 25	+ 34	..	..	..	..	..	+ 66	- 28	- 31	- 50	- 28	- 31	- 41	- 6			
3		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5		..	..	..	..	+ 31	+100	+110	+285	+344	+110	+247	+ 31	+106	+ 56	- 69	+ 69	- 34	+106	-135	+122	+ 25	+ 34	+ 78	- 56				
6		-106	- 38	- 41	+156	+ 66	0	+241	+100	-213	-122	- 69	+150	+238	+297	..	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	- 38	+ 75	- 13	- 34	+ 31	0	..	..	+122	+119	- 59	-106	- 19	+ 63	+ 63	0	+ 50
8	X	+ 78	+ 72	- 28	+ 19	+ 34	- 19	+125	+225	+247	- 6	+216	+163	-125	+ 81	+ 59	+238	0	- 78	- 44	- 81	+ 38	+128	+188	+ 22								
9	X	-172	+ 56	-119	+ 50	- 69	0	+135	+407	+304	+ 88	- 38	- 19	- 47	- 44	0	+131	+ 47	- 28	-125	+ 47	+ 47	0	+ 19	+ 88								
10	X	+ 31	- 28	+113	+ 50	+ 88	+ 28	+ 97	+254	+282	+156	+ 31	- 59	-351	-128	- 19	+ 81	+147	+ 97	0	- 66	- 9	- 28	+ 34	+ 6								
11	X	+ 72	+113	+244	- 16	+ 31	+ 22	+169	+410	+316	-153	-275	-216	-182	0	+ 34	+163	+188	+ 63	- 9	- 72	- 6	- 22	+ 16	- 59								
12		- 38	+ 47	+ 28	+113	+ 41	+ 34	+122	+470	+266	-275	- 81	-213	-225	..	..	+232	+191	+125	+ 63	..	..	..	..	..			
13		+169	+ 44	+156	+ 56	+125	+ 34	+172	+438	+357	- 6	- 69	-128	- 38	+219	+282	+275	+200	- 13	+ 19	..	..	..	..	..			
14		..	+ 28	+ 81	+ 91	+135	+156	+282	+432	+182	+141	- 22	-291	-319	- 66	+119	+156	+203	+369	+285	+182	+250	+182	+219	+203								
15	X	+194	+106	+160	+191	+131	+119	+156	+504	+347	+ 78	+ 50	- 56	+ 31	- 50	+ 31	+210	- 66	- 85	+ 50	+ 50	+ 56	+ 91	+156	+ 88								
16	X	+ 75	+213	+100	+213	- 81	+219	+372	+501	+407	+ 78	-194	-247	+156	+235	- 9	- 81	- 9	+ 66	+ 31	+ 97	+182	+113	+ 6	+ 41								
17	X	- 19	+ 31	+ 19	+ 22	+ 28	+ 63	+203	+470	+316	- 31	-222	-188	-122	+ 47	+141	+ 47	+ 63	- 28	+ 25	+ 25	+ 34	+138	+138	+163								
18	X	+ 9	+ 59	- 28	+ 25	+ 81	+ 56	+ 94	+388	+523	+338	+150	0	-153	-125	- 69	-156	-156	-106	0	- 6	+ 75	+ 63	-122	- 59								
19		+122	+ 88	+ 50	+138	+ 47	+228	+128	- 25	+103	+ 75	+150	- 19	-128	+ 28	+438	+363	+250	+357	+285	+ 66	+144	+ 78	+122	+182								
20		-116	+200	- 9	-313	- 59	- 63	+ 56	+182	+216	- 56	- 63	- 38	+ 66	+156	+247	..	..	..	..	..	..	..	..	..
21		..	..	..	..	..	..	..	+ 50	- 34	- 94	-156	- 78	+ 47	+125	+ 94	+244	+175	+244	-113	-106	- 28	+ 25	+ 50	+ 75	
22		+ 31	+ 44	-394	+322	+ 69	- 66	- 19	+163	+294	+250	+166	+ 94	- 38	+332	+131	- 78	+341	-138	+122	0	- 63	-263	+ 91	+ 66								
23		- 13	-341	+407	+263	0	+116	+219	+338	+200	+ 28	+ 78	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	+ 53	+ 47	+ 44	+ 69	+125	+257	+216	+113	+119	+322	+219	+ 6	+ 25	-135	0	+401	+166	+379	+391	+106	+232	-294						
25	X	- 69	+ 72	+ 78	- 9	- 25	+ 31	+254	+351	+188	+213	-153	- 28	+ 34	+ 63	- 31	+ 31	- 13	- 59	-110	- 25	+ 34	+219	+ 72	+ 50								
26		+ 47	- 22	+ 31	- 31	+ 56	+106	+182	+357	+185	- 44	- 97	- 41	- 94	+ 34	+106	..	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	+372	+285	+113	-441	-410	- 38	-369	+163	+351	..	..	..	..	..	..	..	..
28		..	..	..	..	..	..	..	+538	..	-200	0	-141	+ 41	+169	+150	+104	+ 81	+ 75	+ 85	+100	+ 97	+106	+ 81	..	
29	X	0	- 38	+ 31	+ 16	+ 31	+ 56	+332	+626	+285	+ 69	-191	-241	-185	+ 56	+160	- 94	+100	+363	+191	+ 53	+100	+254	+ 13	+144								
30		- 88	- 63	+128	+ 19	- 28	- 38	+ 72	+438	+535	+254	+131	-110	-351	..	..	..	..	..	..	..	..	..	..	+ 89
31		..	..	..	..	..	..	..	+347	+379	+419	+ 66	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		+ 29	+ 61	+ 20	+ 76	+ 29	+ 59	+165	+327	+278	+ 87	- 7	- 44	- 64	+ 67	+ 84	+ 47	+ 53	+ 62	+ 46	+ 14	+ 55	+ 64	+ 60	+ 63	+ 68							
MEANS 0 DAYS		+ 20	+ 66	+ 57	+ 56	+ 25	+ 58	+194	+414	+322	+ 83	- 63	+ 89	- 94	+ 14	+ 30	+ 57	+ 30	+ 20	+ 1	+ 2	+ 55	+ 96	+ 52	+ 51	+ 61							

TABLE 143

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT										LINE		OM		LENGTH IN KMS										56.8										DIRECTION										N 19° 5' E																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1935

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

SEPTEMBER 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME.)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° .5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	X	+ 90	+120	+126	+150	+123	+153	+300	+549	+429	+189	-180	-444	-321	- 63	+ 66	+123	+168	+120	+ 90	+ 84	+168	+177	+147	+120	..						
3		+153	+129	+ 60	+183	+150	+ 99	+375	+495	0	- 12	-228	-300	-243	-117	+ 60	+ 33	+ 99	+ 93	+168	+105	+ 81	+ 75	+114	+ 87	+ 69						
4		+ 36	+ 57	- 6	+159	+114	+ 36	+240	+264	+357	+ 99	- 66	- 42	+ 12	-171	- 39	+450	- 96	+ 75	0	+222	+432	+114	+ 33	+ 48	+ 97						
5	X	+ 60	+ 66	+ 69	+252	+ 60	+ 78	+150	+198	+120	+ 21	+ 45	- 87	-156	0	+ 42	+ 51	- 39	+ 42	- 60	+ 30	- 54	+ 33	0	+ 51	+ 40						
6		-108	- 24	+132	+126	- 36	+ 54	+183	+189	+ 42	+ 15	+ 84	- 33	- 45	- 60	+ 6	- 24	+ 30	- 57	-114	+120	+213	+ 60	- 27	- 99	+ 26						
7	X	- 63	- 9	+ 33	+ 60	- 33	+108	+120	+135	0	+ 48	-150	- 84	+ 15	+108	+ 39	+ 48	+ 66	+180	- 27	- 48	+ 12	+ 15	+ 30	+ 36	+ 27						
8	X	+120	+144	0	+ 18	+ 48	+ 27	+150	+225	+180	+ 87	- 57	-150	- 96	0	+ 33	+ 39	0	- 27	+ 60	- 6	0	+ 87	+183	+153	+ 58						
9		- 93	+111	- 9	+ 6	- 18	+ 6	+150	+189	+ 54	- 63	-171	-177	+ 51	+159	+ 42	+168	- 63	- 36	+ 6	+234	- 87	+ 93	+ 30	- 63	+ 14						
10		+ 15	-105	+ 57	+144	+ 90	+ 63	+ 63	+195	+ 18	-198	- 33	+ 99	-270	-162	-174	+480	+ 33	+ 81	+261	-180	+333	+228	+120	-111	+ 44						
11		+246	+423	+ 93	+ 54	- 42	+150	-462	+702	..	..	..	..	..	..	..	..	..	+522	+570	-444	+270	+198	+ 78	-660	..
12		-363	- 42	- 90	-120	- 45	+ 27	+ 90	+183	+ 93	+ 39	-117	-216	-240	- 27	- 57	+ 48	+ 63	0	- 15	- 27	- 27	- 33	- 87	- 75	- 43						
13	X	- 6	- 60	- 27	- 6	- 24	+ 27	+102	+330	+207	0	-177	-306	-330	-213	- 63	+ 15	+ 60	+ 45	+ 27	0	- 33	- 57	0	-188	- 27						
14	X	- 75	- 66	+ 33	+ 6	- 30	+ 36	+204	+345	+108	- 6	- 87	-255	- 96	- 87	- 27	- 36	+ 18	- 12	-117	- 78	- 30	- 60	- 33	-195	- 22						
15		-348	+222	+177	+ 54	+ 63	+ 33	+162	+ 27	+ 33	+ 27	- 18	+ 6	- 57	+ 57	+426	+117	+408	+213	- 24	-102	-156	+111	- 27	- 87	+ 55						
16		-174	+210	-111	-150	-168	-174	- 24	+285	+249	-135	-207	-213	-210	- 81	- 24	+295	+146	+ 27	- 12	- 22	+149	-303	-166	-290	- 46						
17		+127	+205	- 90	- 37	-122	-351	+ 7	-200	- 68	0	- 66	+ 24	+ 61	+ 83	- 54	0	+161	+503	-220	-146	+170	+354	-254	+ 7	+ 4						
18		-930	+544	- 10	- 61	-185	+171	+ 49	+102	+149	+ 24	+ 76	- 29	-122	- 73	- 17	+132	-127	- 34	+117	+ 73	-205	+ 73	+ 76	+259	+ 2						
19		- 98	-249	+ 51	+ 20	- 49	-132	- 73	+100	- 73	-117	-144	- 88	+176	+144	+ 59	+ 88	+102	- 56	-149	- 37	-159	- 15	-300	+ 68	- 39						
20	X	- 29	- 95	- 78	-183	+ 34	- 5	+ 44	+ 49	+ 73	- 5	-124	-185	-144	- 54	- 20	+ 29	+ 7	- 17	- 61	- 27	- 7	- 46	0	- 71	- 38						
21	X	- 15	- 24	- 27	- 29	- 24	- 22	+102	+195	+ 71	- 61	-283	-110	+ 34	+ 95	+ 93	+ 46	- 54	-185	-144	- 29	- 22	- 49	- 73	- 93	- 25						
22		- 46	- 24	- 27	- 15	- 22	+ 12	+132	+246	+149	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	+561	+ 95	0	- 46	+146	+264	+132	+327	+456	+ 49	+ 73	+142	-193	+107	- 44	-144	- 22	..
24		+ 24	+ 83	+ 44	+100	+146	+ 98	+317	+354	+193	0	-295	-124	-120	+ 51	+266	+366	+144	+205	- 17	-712	+610	-163	+476	+268	+ 96						
25		+417	-412	+988	0	+181	+159	+361	+117	+503	- 7	+122	- 76	-327	0	+190	+254	+332	-256	- 17	+190	+381	+ 29	+ 61	+337	+147						
26	X	-188	- 39	+ 56	0	- 76	0	+195	+512	+288	+171	+ 76	- 63	- 54	+112	- 12	- 46	+ 10	- 88	- 24	- 10	+ 85	+239	+232	+149	+ 65						
27	X	- 15	+ 29	+146	+ 37	-127	- 61	+110	+398	+278	+ 63	-127	-149	-100	-149	- 81	+ 68	+122	+ 49	- 46	- 34	- 24	- 49	- 37	+307	+ 25						
28		- 85	+139	+ 83	-132	-205	-217	+171	+295	+256	+295	+193	- 39	- 78	- 76	-100	-122	- 73	+ 46	+334	+102	- 37	- 15	- 46	- 61	+ 26						
29		-134	- 22	-122	- 15	-224	+ 68	+ 63	+439	+312	+ 76	+ 59	- 98	-107	-100	+132	-273	-227	-102	- 7	+ 61	+163	+271	+295	+222	+ 30						
30		+ 98	- 39	-146	+ 78	-348	-376	- 95	+183	+434	+ 27	0	+ 76	-195	- 22	+ 34	+386	-181	-293	-144	0	0	0	-342	+752	- 5						
MEANS ALL DAYS		- 61	+ 34	+ 52	+ 25	- 27	- 4	+135	+237	+166	+ 22	- 72	-118	-114	- 25	+ 32	+105	+ 43	+ 20	- 5	- 9	+ 95	+ 37	+ 17	+ 54	+ 26						
MEANS 10 DAYS		- 12	+ 7	+ 33	+ 30	- 5	+ 34	+148	+294	+175	+ 51	-106	-183	-125	- 28	+ 7	+ 34	+ 36	+ 11	- 30	- 12	- 10	+ 27	+ 48	+ 26	+ 20						

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 145

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 19°.5 E										
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1		-405	+661	-313	-70	-218	-126	+9	+139	+91	-178	-361	-352	-587	-91	+357	-196	-74	-87	+26	+170	+174	+83	+13	+26	-55						
2		-91	-113	+70	-78	-109	-83	-44	-26	+178	+104	-70	-61	-435	-326	-96	+452	+522	-244	+48	+87	+48	+44	+48	-48	-9						
3	X	-17	-26	-126	-78	-87	-52	+44	+244	+209	+148	+435	-96	-231	-174	-78	-48	-9	-9	-70	-48	-52	-44	+70	-83	-7						
4	X	-9	-52	-61	-17	-17	+48	+157	+222	+344	+226	0	-213	-235	-300	-300	-126	-187	+91	+122	+104	-39	-52	-9	-39	-14						
5	X	-52	-61	0	-13	0	-48	0	+148	+352	+48	-109	-213	-218	-104	0	0	-126	-87	-48	-39	0	-126	-26	-57	-32						
6	X	-57	-26	-26	-39	-9	-17	0	+174	+313	+70	-209	-304	-226	-170	-165	-130	-70	+635	-252	-130	-48	-30	+39	+44	-51						
7		-78	-52	+126	-78	+170	+239	+196	+239	+165	-65	-157	-244	-78	-52	+74	-91	+83	+122	+44	+17	0	-83	-26	+13	+20						
8	X	0	+78	+9	+78	+122	+135	+218	+178	+244	+122	-135	-348	-265	-326	-44	+126	-130	0	+78	-170	-39	+30	+35	+61	+2						
9	X	+70	+61	+91	+130	+9	+218	+270	+287	+261	-187	-561	-605	-383	-57	+209	+165	+91	0	+13	+48	+48	-48	-135	-52	-2						
10	X	-39	0	0	-39	-13	0	+209	+178	+365	+52	-500	-418	-287	-235	+70	0	0	-39	+9	0	-44	-91	-126	-87	-43						
11		-39	-52	-26	-22	-17	-83	+204	+505	-222	-139	-274	-283	-91	-65	+48	+35	..	..	..	..	..	..	..	..	..
12		..	-52	-83	0	+9	+70	+313	+348	+187	-135	-557	-613	-383	-187	-78	-39	-87	-96	+83	+57	0	0	-83	-96	..						
13		-91	-100	-126	-113	+35	+122	+309	+392	+222	-61	-526	-618	-383	-104	+144	-65	-104	-74	-196	+165	+91	+753	-100	-104	-22						
14		-392	+17	-113	-183	-48	+122	+444	+465	+361	-126	-457	-561	-339	-139	-174	-52	+35	+70	+657	0	-130	+235	-174	-291	-32						
15		-278	-287	-392	-26	-387	+392	+400	+352	+526	-91	-130	-409	-96	-344	-226	-148	0	0	-70	+91	+231	+35	+209	+74	-24						
16	X	-39	-526	-209	-209	-130	-130	+265	+309	+222	-22	-152	-183	-331	-270	-239	-218	-87	+17	-39	+44	-17	-35	+87	-100	-83						
17		-122	-222	-22	-187	-887	+178	+296	+457	+413	-257	-265	-313	-178	-104	-48	-13	-83	+35	+740	-396	-130	+44	+70	-470	-61						
18		+235	-30	-178	-183	-218	-44	+9	+87	+126	+213	+139	-218	-313	-304	-435	-126	-48	-78	-91	-87	-52	-91	-91	-44	-76						
19	X	+35	-331	-139	-122	-91	+78	+109	+274	+244	+39	-239	-165	-126	-352	-174	-222	-122	-44	-26	-100	-130	-91	-130	+39	-74						
20		-157	-74	-26	-387	-592	+687	+44	+248	-57	+570	+370	+235	+87	+261	+170	-309	-139	-96	-139	-74	+26	-113	-70	-344	+5						
21		+261	-109	-304	-26	-439	-270	+222	+152	+261	-48	0	-400	-191	-252	+48	+600	-452	-326	-26	+509	-265	+130	-674	0	-66						
22		-22	-135	-322	-231	-178	-492	+696	+418	+396	-48	-505	-370	-152	+178	0	-39	-30	-48	+87	+222	-44	-74	-174	-352	-51						
23		-91	-39	-44	-83	-39	+17	+183	+352	+274	+78	-218	-400	-470	-339	-161	-35	+35	+13	+9	-48	-87	-57	+30	-240	-57						
24		-227	-113	+558	-371	-353	+606	+35	+558	-340	+244	-179	-192	-279	-92	-100	+65	-35	-74	-109	-187	-140	-13	-44	-92	-36						
25		-122	-144	-44	0	0	0	+113	+266	+26	-283	-680	-545	-113	-17	+126	+87	+344	-179	0	-78	-183	-135	-131	-135	-76						
26		-126	-140	-140	-44	-13	+48	+131	+218	+105	-9	-253	-310	-397	-301	-201	-44	-70	-52	+131	+92	-131	-296	-78	-48	-80						
27		-35	-44	-157	+65	0	-305	+83	+61	-30	-52	+26	-122	+83	-105	+148	+44	+70	-61	+353	-9	-126	-113	-65	-397	-29						
28		-349	+48	-44	-366	-70	+140	+39	+131	-78	-39	-100	-658	-214	-323	-96	+61	+48	+57	+87	+179	-100	-9	-113	-214	-83						
29	X	-131	-48	-493	+218	+44	-87	+153	+331	+405	-353	-353	-275	-301	-214	-92	-9	+26	-35	+135	+148	+179	+135	+179	+301	-6						
30		-161	-732	+9	-87	-231	-305	0	-131	+35	-353	-187	+26	-78	-39	-65	-48	-166	0	+48	+222	-92	+262	+44	+17	-84						
31		-222	-371	-283	-414	-985	+153	+35	-567	+414	-96	+118	-35	-218	-92	0	+44	+39	-126	+83	+92	+92	-26	-183	-344	-120						
MEANS ALL DAYS		-94	-100	-93	-102	-163	+42	+159	+212	+209	-12	-181	-289	-240	-165	-46	-9	-22	-21	+55	+28	-33	+8	-53	-102	-42						
MEANS 10 DAYS		-24	-93	-95	-9	-17	+14	+142	+234	+296	+14	-182	-282	-260	-220	-81	-46	-61	+53	-8	-14	-14	-35	-2	+3	-29						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT EASTWARD										LINE ON		LENGTH IN KMS 93.9										DIRECTION E 0° .5 N											
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN									
1		-226	+406	-194	-52	-145	-62	+9	+84	+59	-118	-236	-221	-367	-145	+135	-143	-39	-49	+20	+101	+101	+49	+5	+17	-42									
2		-76	-71	+49	-30	-54	-52	-27	-15	+103	+52	-34	-54	-271	-221	-76	+278	+305	-162	+30	+52	+47	+25	+27	-27	-8									
3	X	-12	-22	-76	-52	-52	-25	+22	+148	+133	+101	+241	-71	-143	-98	-52	-20	+5	0	-27	-22	-30	-15	+27	-47	-4									
4	X	-7	-39	-52	0	-10	0	+64	+180	+221	+145	0	-121	-121	-172	-180	-76	-101	+52	+71	+74	-7	-22	+5	-2	-4									
5	X	-22	-37	0	-20	-5	-39	-7	+98	+212	+39	-54	-125	-121	-71	0	0	-71	-44	-39	-22	+7	-62	0	-25	-17									
6	X	-22	-20	-27	-30	-20	-22	-25	+101	+194	+42	-123	-177	-128	-76	-79	-69	-37	+376	-148	-76	-27	-20	+37	+25	-15									
7		-49	-34	+49	-71	+123	+143	+111	+116	+96	-47	-118	-135	-71	-30	+5	-194	-37	+76	+27	+5	+20	-20	-25	+49	0									
8	X	-15	-12	-32	-49	+27	+47	+140	+162	+192	+160	+62	-162	-135	-172	-47	+160	-226	-22	+5	-123	-39	-44	-39	-30	-8									
9	X	-25	-32	-10	-32	-59	+145	+150	+170	+224	-10	-298	-394	-278	-49	+155	+101	+128	+25	-76	-57	+172	-7	-106	-52	-9									
10	X	-74	+12	-22	-47	-30	-37	+172	+207	+408	+256	-162	-280	-172	-121	+182	-123	-138	-101	-47	-30	-62	-76	-49	-71	-17									
11		-62	-79	-30	-64	-71	-175	+148	+662	+155	-44	-86	-44	-30	+44	+76	+39	..	..	..	..	..	..	..	..	..
12	..	..	..	..	..	..	..	..	+197	+177	+76	-256	-268	..	..	..	..	..	..	..	..	..	..	..	..	..
13	..	..	..	..	..	..	..	..	+344	+295	+150	-118	-155	-106	-69	-271	-271	-191	-62	-182	+283	+261	+339	+266	-27	..	
14	-504	+74	-76	-76	-111	-138	-7	+251	+408	+371	+273	..	..	..	..	..	..	..	..	..	..	..	..	..	-138	..
15	-148	-251	-322	+108	-367	-367	+246	+248	+248	+430	+20	+293	+39	+320	-101	-248	-234	-47	-74	-162	+153	+308	-517	+442	+148	+22									
16	X	+76	-246	-172	-148	-39	-143	+335	+310	+197	+76	+74	+125	-59	-160	-263	-177	-47	+93	-73	+59	-268	+118	+138	-135	-14									
17	+22	-113	-32	-37	-541	-12	+145	+384	+433	+69	-30	+10	+69	+27	+37	-30	-128	+108	+278	-62	-93	+103	-37	-472	+4	4									
18	+305	+138	-133	-160	-123	-5	-44	-7	+96	+273	+448	+157	-121	-162	-308	-91	-44	-44	-106	-76	+2	-30	-74	+17	-4	4									
19	X	+54	-219	-148	-86	-74	+27	+52	+113	+197	+130	+71	+182	+248	-251	-145	-160	-47	0	0	-76	-133	-49	-111	+162	-11									
20	-160	-76	-113	-426	+357	-256	+561	+772	-170	+519	+408	+428	+399	+399	+561	+39	-391	-194	-91	-98	-52	+30	-71	-155	-10	+75									
21	+251	-32	-246	-153	-241	-180	+66	+25	+184	+305	+541	-138	-79	-285	-150	+974	-519	-453	-22	+642	-197	+39	-246	-30	-2	2									
22	-10	-62	-143	-125	-121	-344	-12	+145	+263	+384	+125	-189	-143	-10	+106	-106	-52	-98	-71	+86	+219	-47	-17	-108	-184	-10									
23	-57	-20	-47	-86	-47	-20	+89	+212	+219	+150	0	-79	-165	-219	-160	-92	0	+62	+24	-36	-59	0	+18	-196	-21	21									
24	-291	-125	+680	-178	-71	+374	+315	+600	-261	+187	+166	+178	-42	-74	-148	-6	-18	-86	-92	-178	-65	+12	+89	-56	+38	38									
25	-74	-95	-36	+30	+27	+24	+59	+151	-24	-148	-342	-238	+285	+285	0	+241	+89	+502	-303	+6	-113	-264	-62	-56	-89	-18									
26	-86	-122	-92	-45	-24	+30	+62	+116	+59	+107	0	-21	-143	-119	-148	-15	-65	-92	+148	+119	-101	-169	-53	+18	-28	28									
27	-223	+172	-36	+18	+24	-151	+18	+59	+36	+172	+416	+288	+440	+92	+89	0	+27	-59	+359	-50	-202	-89	-107	-440	+36	36									
28	-238	+36	-30	-148	-116	+80	-56	-15	+36	+220	+514	-386	-211	-92	-89	0	-27	-6	+62	+131	0	+36	-83	-119	-21	21									
29	X	-92	-39	-395	+113	+27	-95	+113	+264	+478	-80	-45	+6	-175	-190	-119	-45	+36	-27	+143	+202	+312	+190	+53	+318	+40	40								
30	-131	-499	-107	0	-267	-264	+24	-148	+101	-86	-36	+143	+107	0	-33	-83	-151	-33	+59	+318	+59	+163	-15	+53	-34	34									
31	-252	-416	-110	-214	-410	-172	+56	-261	-110	-137	+330	+166	+21	-39	+48	+65	+30	-187	+95	+148	+151	-238	-42	-166	-68	68									
MEANS ALL DAYS		-59	-67	-67	-71	-83	-28	+114	+161	+153	+93	+70	-38	-34	-76	-53	-12	-37	-41	+19	+46	-114	-29	-17	-50	-5	5								
MEANS 10 DAYS		-14	-66	-93	-35	-24	-14	+102	+175	+246	+86	-23	-102	-108	-136	-55	-41	-50	+35	-19	-7	-8	+1	-4	+14	-6	6								

* = 10 LEAST DISTURBED DAYS

TABLE 147

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1935

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-39	-126	-476	-69	-69	-26	+108	+139	-56	-52	-182	-126	-139	-134	-143	-113	-178	+121	+126	-91	-35	-87	-126	-43	-76
2		-173	-134	-312	-43	-169	-35	-65	+225	0	0	-307	-255	-121	-48	+9	-69	-95	+536	-294	+156	-100	-91	-82	-346	-76
3		+26	-78	-82	-126	-52	-82	0	+113	+56	+74	-264	-312	-316	-78	-199	+156	0	-130	-39	-48	-13	-39	-91	-43	-65
4	X	-48	-35	-52	-52	-61	-22	+121	+208	+152	0	-216	-303	-364	-229	-216	-208	-91	-91	+52	-104	-91	-35	-65	-65	-76
5		-65	-22	-39	-139	+100	+35	-26	+69	+307	+303	-152	-61	-624	-303	+152	+468	+65	-48	-126	+303	+134	0	-195	-606	-20
6		+411	-82	-303	-329	-48	+43	-9	+87	+22	-108	-156	-325	-299	-82	-48	0	-126	-95	-91	-91	-39	-52	-126	-78	-80
7	X	-91	-39	-43	+39	-126	-52	-61	0	0	9	-52	-126	-221	-212	+9	-35	0	+22	+13	-78	-195	-126	-372	-147	-79
8	X	-368	-134	-48	-212	-100	-61	0	+56	+325	-212	-515	-433	-446	0	+113	+93	-81	-105	-73	-122	-134	-146	-97	-117	-117
9		-12	+40	+219	+105	+498	+316	+454	+486	+324	+49	-134	-405	-441	-239	+40	+101	+20	+126	+73	+49	+40	+32	-77	-32	+68
10	X	-117	-40	-32	+8	0	+32	+202	+284	+235	+8	-215	-446	-478	-166	-85	-32	-105	+12	+20	+73	-36	-20	-40	-85	-43
11		-117	-105	-45	+40	+40	+49	+198	+450	+385	+182	-194	-531	-202	-348	-77	+45	+49	+113	+126	-117	+117	+591	-126	-324	+8
12		-535	+85	-12	-32	-425	-328	+502	+267	+263	-166	+32	-207	-126	+24	-117	+40	+543	+16	-57	-186	+194	-198	+227	-142	-14
13		-300	-158	-178	-381	-24	-36	+162	+364	+425	+36	-49	-275	-356	-219	-57	+113	-211	0	8	+126	+69	-202	+24	-628	-73
14		+304	0	-142	-85	-166	-259	-178	+247	+12	+194	-146	-24	+126	-413	-304	-89	-12	+105	+49	+49	0	-32	-36	-263	-44
15	X	-109	-117	-122	-77	-77	-45	+73	+215	+154	+36	-12	-239	-360	-288	-279	-247	-134	-65	-40	-36	-40	-49	-77	-89	-84
16	X	-122	-93	-202	+53	-36	-122	-65	+215	+36	-61	-57	-279	-284	-279	-36	-36	-126	+28	+40	+57	+40	-36	-73	-8	-65
17	X	-85	-73	-85	-174	-126	-77	0	+182	+166	+85	-8	-243	-328	-243	-219	-198	-198	-113	+16	+49	+97	-12	-142	-126	-77
18		-146	-122	-93	-122	-81	-117	-20	+194	+202	-20	0	-352	-389	-263	-284	+40	0	+16	+122	+97	+182	-61	-117	+8	-55
19		-8	-247	+24	-202	-77	-77	-146	+130	-73	+40	0	-142	-219	-219	+93	-166	-202	-85	-81	-20	0	-45	-162	-85	-82
20		-57	-247	-49	-57	+40	-288	-360	+251	+28	+279	-138	-122	+85	-138	-45	-251	-211	-49	-8	-8	-12	+20	-170	-85	-66
21		-146	-105	-182	-239	-16	-122	+126	+154	+207	+235	+20	-288	-279	-292	-284	-207	-113	-73	-40	-77	-81	-77	-81	-162	-88
22	X	-81	-113	-117	-166	+12	+12	-20	+146	+142	+158	-81	-482	-486	-328	-81	-24	+97	-36	-16	-16	-40	0	+8	-85	-67
23		-166	-85	-324	-138	+40	-77	-166	-20	+57	+81	-32	-198	-288	-194	-126	-154	-122	-126	-49	-40	-49	0	-77	-36	-95
24		-267	-158	-166	-101	0	0	0	+36	+12	+85	+73	-85	-215	-57	-93	-93	0	+36	-36	-36	-36	-49	+49	+57	-44
25	X	-81	+89	+194	+105	+170	+57	0	+77	+36	+32	-8	-142	-219	-126	-166	+271	+73	+170	+126	+134	+40	-20	-32	-45	+31
26	X	-36	+8	-49	-40	-45	-20	-20	+142	+202	+85	-49	-247	-320	-126	-32	-122	-61	+45	+81	+65	+45	-36	-45	-36	-25
27		+81	0	-117	-162	-158	-113	+61	+652	+713	+652	-158	-122	-369	-429	-130	-49	+97	+49	+85	+97	+12	0	+49	-158	+24
28		-235	-101	-296	+40	-101	-267	-16	+134	+227	+267	+77	-271	-429	-300	-202	-130	-36	+12	+77	+32	-162	-117	-158	-61	-84
29		-162	-194	-239	-198	-85	-61	0	+162	+344	+364	-8	-405	-506	-284	-93	-93	+69	+49	+77	+57	0	+117	+324	-65	-35
30		+182	-158	-49	-429	-12	+178	0	-300	-20	0	+146	-360	-28	-166	+130	+158	-85	-32	+49	+53	+162	+142	-113	+644	+4
MEANS																										
ALL DAYS		-85	-85	-114	-106	-38	-52	+28	+178	+163	+87	-93	-260	-288	-206	-92	-28	-39	+14	+6	+7	+2	-21	-67	-108	-50
MEANS																										
10 DAYS		-114	-55	-56	-52	-39	-30	+23	+152	+145	+12	-121	-294	-351	-200	-99	-54	-63	-13	+22	-9	-31	-48	-94	-80	-60

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1935
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
NOVEMBER 1935
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD										LINE ON										LENGTH IN KMS 93.9										DIRECTION E 0° .5 N									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN													
1		- 41	- 74	-373	-107	-201	+ 30	+ 59	+ 92	+ 59	- 27	- 30	+ 86	+107	+ 24	- 50	- 71	-124	+222	+101	- 18	- 92	+ 44	- 86	+ 86	- 16													
2		- 59	-101	-172	- 27	- 65	+ 12	+ 30	+101	- 12	+ 41	+ 33	+ 74	+ 89	+ 33	+ 62	+ 62	+ 77	+252	-154	+225	-163	- 33	- 33	-246	+ 1													
3		+ 36	- 30	- 30	- 59	- 56	- 71	- 44	+ 41	+ 92	+305	- 18	- 92	- 77	- 62	- 41	+172	- 56	-234	- 65	- 62	- 36	- 12	- 18	0	- 17													
4	X	- 38	- 24	- 41	- 56	- 41	- 36	+ 74	+ 77	+148	+121	- 30	- 89	-151	- 74	-145	-210	- 59	- 62	+ 92	-127	- 86	- 18	0	+ 24	- 31													
5		- 62	0	+ 41	- 62	- 36	+ 30	- 33	- 47	+355	+420	+281	+462	-414	-243	+269	+787	-166	0	-181	+154	-207	+329	- 77	-663	+ 39													
6		+361	+ 89	-213	-222	- 89	+ 44	- 12	- 74	0	+ 12	+ 30	-133	-118	0	0	0	- 98	- 47	- 83	- 71	+ 36	0	- 56	- 36	- 28													
7	X	- 62	- 30	- 24	+ 30	- 92	- 59	-101	- 98	- 24	+ 89	+104	+115	+ 24	- 95	0	- 65	0	- 9	- 21	+ 41	- 59	- 24	-160	+ 12	- 21													
8	X	-130	0	- 33	- 92	-145	- 80	0	+ 27	+219	+127	-181	-201	-189	+ 12	+ 30	+112	- 24	- 83	- 47	- 33	- 30	- 65	- 33	- 89	- 39													
9		- 59	- 56	- 15	-145	+166	+ 44	+ 95	+210	+266	+210	+ 56	-136	-252	-240	- 36	+ 24	- 71	- 56	+ 18	+ 33	+ 59	+ 30	-107	- 35	0													
10	X	- 89	- 53	- 53	- 27	- 44	- 27	+115	+219	+296	+207	+ 12	-181	-361	-210	-237	-178	-201	- 53	- 59	+ 44	- 36	- 12	- 18	- 47	- 41													
11		-148	- 83	- 9	- 18	- 59	- 36	+124	+243	+320	+385	+151	-237	+ 47	-234	- 95	+ 6	+ 65	+ 92	+ 62	-115	+115	+610	+130	-201	+ 46													
12		-474	+ 89	- 41	- 44	-142	-403	+151	+210	+681	+107	+ 95	- 74	+ 47	+ 89	- 18	+ 21	+237	+657	+485	+314	+142	-311	+ 77	0	+ 79													
13		-201	- 89	-133	-201	-228	-204	+ 62	+172	+367	+178	+222	-133	-237	-130	+ 30	+160	-367	-115	-181	+ 89	-237	- 41	+110	-231	- 60													
14		+391	+ 92	-118	0	-189	-207	-160	+112	0	+450	+133	+133	+311	- 65	-329	-243	-175	+ 30	- 9	0	- 56	- 24	-148	-130	- 8													
15	X	- 36	- 98	-107	- 86	- 65	- 68	- 36	+ 33	+ 59	+181	+243	+133	- 65	-195	-281	-293	-204	-130	- 59	- 36	- 33	- 9	- 36	- 59	- 52													
16	X	- 86	- 6	-184	+ 59	- 24	-145	-121	+136	+ 6	+ 83	+160	+ 30	- 56	- 6	- 30	- 15	- 83	- 30	- 65	- 86	- 6	- 77	- 86	+ 6	- 26													
17	X	- 6	- 27	-136	-186	- 65	-115	- 33	+ 86	+ 89	+121	+172	+ 68	-115	-118	-192	-181	-222	-166	- 15	+ 59	+178	- 6	-148	- 92	- 44													
18		- 89	- 89	- 83	- 89	- 62	-115	- 30	+ 27	+104	+ 77	+151	-204	-213	- 74	-222	+222	+101	- 41	+ 89	+181	+252	- 50	- 86	0	- 10													
19		-148	+ 41	- 44	-136	-189	- 30	- 89	+ 15	+ 12	+ 56	+234	0	- 24	- 71	+207	-181	-154	-136	- 89	+ 53	+ 62	+ 41	-175	- 24	- 32													
20		+ 15	-160	-101	- 30	+ 27	- 89	- 83	- 6	- 38	+382	-130	+ 62	+263	0	+ 86	-263	-207	- 62	+ 15	0	+ 47	- 41	-124	+ 86	- 15													
21		- 89	- 65	-121	-207	+130	-148	+ 12	+172	+210	+340	+181	- 30	- 30	-151	-222	-240	-175	-121	- 74	- 56	- 68	- 36	- 41	-104	- 39													
22	X	- 33	- 68	- 86	- 95	- 15	- 6	- 56	+104	+207	+231	+240	-130	-225	-124	- 53	- 27	+ 33	-107	- 83	- 18	- 9	+ 62	+ 98	- 89	- 10													
23		- 33	- 83	-178	..	..	..	..	..	..	..	+385	+299	+121	+ 95	+ 33	- 47	- 77	- 38	+ 71	+142	+136	+184	+148	+192	..						
24		- 62	0	- 56	- 56	0	- 56	0	+ 77	+ 59	+213	+340	+326	+118	+ 89	+ 30	- 18	+ 33	+ 77	0	+ 65	+ 27	+ 56	+ 62	+107	+ 60													
25	X	- 27	- 15	+ 21	- 9	+ 68	+ 53	0	+ 21	+ 62	+104	+263	+166	+ 59	+ 36	- 62	- 18	- 47	0	+ 36	+ 59	+ 33	+ 6	+ 27	+ 59	+ 37													
26	X	+ 24	+ 33	- 6	- 30	- 30	0	- 44	+ 59	+121	+157	+417	+127	- 15	+ 18	+ 9	-121	- 77	- 56	+ 74	+ 89	+121	+ 36	+ 15	- 36	+ 37													
27		+ 71	- 89	- 71	- 83	- 44	- 33	- 6	+142	+482	+743	+249	+414	+225	-509	-124	- 86	- 24	- 30	+ 30	+110	+ 62	+ 33	+142	- 95	+ 63													
28		-160	+ 41	-115	+ 24	- 65	-151	- 30	- 6	+163	+ 44	+145	+169	-151	-175	-219	-204	-145	- 62	+ 30	- 30	- 89	-110	- 18	+107	- 42													
29		- 41	-133	-130	-195	-157	-145	-136	+ 71	+320	+444	+269	+ 80	-154	-104	- 80	-308	- 59	+ 24	+ 74	+ 89	+ 15	+145	- 41	+403	+ 10													
30		+373	0	+ 56	-157	+ 44	+163	+ 24	-175	- 47	+169	+444	+ 92	+204	+ 74	+ 74	-222	-231	-133	- 30	+ 98	+243	- 74	+148	+302	+ 60													
MEANS ALL DAYS		- 30	- 31	- 82	- 80	- 58	- 64	- 9	+ 70	+158	+206	+141	+ 31	- 47	- 86	- 57	- 48	- 84	- 13	- 4	+ 36	+ 3	+ 15	- 24	- 34	- 3													
MEANS 10 DAYS		- 48	- 29	- 65	- 49	- 45	- 48	- 20	+ 66	+118	+142	+140	+ 4	-109	- 76	- 96	-100	- 88	- 70	- 15	- 1	+ 7	- 11	- 34	- 31	- 11													

* = 10 LEAST DISTURBED DAYS

TABLE 149

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1935

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

DECEMBER 1935

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE OM										LENGTH IN KMS 56.8										DIRECTION N 19° 5' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		-240	-300	-386	-32	-106	-93	-45	-199	+183	+410	-175	-199	-398	-264	+97	+73	-16	+85	-142	+187	+175	-93	-142	-114	-72																
2		-162	-223	-183	+77	-207	-763	+552	+97	+134	+77	0	-203	-296	-292	+41	+85	+162	+503	-369	-65	0	+122	-207	-114	-51																
3		-85	-106	-183	-130	-162	-73	-203	+97	+426	-158	+187	-183	-215	-203	-142	-122	-24	-166	-73	-45	-162	-122	-89	-126	-86																
4	X	-114	-93	-85	-118	-195	-138	-199	-77	+65	+61	-37	-187	-211	-37	+114	+45	+126	+45	-37	-32	-49	-73	-65	-57	-56																
5	X	0	0	-89	-73	-114	-183	-166	-122	-32	+110	+45	-227	-256	-49	-41	-49	0	-53	-81	-45	-77	-81	-73	0	-69																
6	X	+73	+114	+110	-77	+122	-114	-73	-122	+207	+126	+16	-272	-248	-268	-114	-12	-73	-8	-77	-45	-89	-122	-77	0	-43																
7	X	-65	-20	-142	-93	-438	-187	-162	-49	+97	+65	-41	-171	-284	-158	-97	-49	-81	+118	+45	-16	-85	-85	-166	-138	-92																
8	X	-203	-276	-183	-89	-122	-102	-162	0	+65	+227	-85	-227	-235	-114	-97	-37	0	-28	0	-24	-45	-118	-158	-207	-92																
9		-179	-73	-77	-65	-146	-53	-32	-61	-69	-89	-166	-268	-122	-118	-73	-45	+329	-49	+97	+32	+41	-12	-130	-284	-67																
10	X	-244	-276	-130	-158	-122	-73	-73	+77	+65	+12	-53	-365	-292	-146	-20	-106	-12	0	+73	+73	0	-138	-179	-126	-92																
11		-179	-223	+12	-41	-414	+73	+20	-260	+171	+187	+126	-223	-365	-459	-235	-211	-61	+41	+187	+97	+65	+12	-49	-268	-83																
12		-487	-240	0	-85	-118	0	-73	+85	-12	-49	+45	-325	-166	-235	-110	+65	-8	+114	+49	-211	-130	+85	+65	-199	-81																
13		-102	-73	-85	-211	-240	-223	+284	+57	+158	+199	+235	-240	-487	-406	-325	-162	-45	-32	-32	0	-45	-97	-89	-122	-87																
14		-162	-126	-114	-207	+32	+16	-158	+410	+219	+447	+512	-77	-317	-512	-207	+304	-203	+235	+260	+317	+61	-114	-207	+175	-13																
15		-154	-195	-264	-508	-414	-227	+45	+215	+65	+443	+345	-187	-532	-508	-426	-93	-89	+28	-45	-32	+93	-146	-37	-329	-123																
16		+65	+114	-69	-536	+73	-20	-179	0	+158	+235	+183	-85	-414	-304	0	-45	-81	-8	0	+37	-49	-142	-162	-85	-55																
17		-146	-146	-333	-16	-97	-268	+61	+89	+122	+284	+8	-248	-410	-508	-361	0	0	-106	-89	-32	-37	+16	-49	-114	-99																
18		-154	-386	+37	-138	-166	-122	-284	+65	+154	+447	+126	-211	-430	-483	-292	-162	+260	+122	-118	-45	-65	-89	-28	-240	-92																
19		-187	-199	-175	-154	-227	-317	0	-37	+211	+398	+219	-130	-443	-288	-235	-166	+41	+16	-49	-81	-57	-207	-154	-81	-96																
20	X	-158	-187	-179	-41	-122	-199	-61	-199	+85	+146	+211	-89	-223	-292	-187	-126	0	-73	-106	-114	-89	-118	-126	-158	-100																
21	X	-118	-110	-162	-268	-199	-93	+8	0	+106	+276	-12	-304	-211	-85	-102	-118	-57	+89	-32	-53	-118	-97	-73	-118	-77																
22	X	-122	-122	+65	+37	+65	+77	+41	+97	+126	+142	+203	-12	-341	-337	-138	+97	+122	+45	-8	-65	-97	-89	-89	-126	-18																
23	X	-162	-130	-219	-244	-207	-166	-211	-122	0	+106	+57	-215	-329	-235	-248	-248	-57	-37	-45	-41	-81	-183	-41	-122	-132																
24		-114	-134	-179	-106	-73	-97	-97	+138	+288	+345	+162	-382	-487	-540	-658	+97	+304	+191	+61	-41	-8	-49	-73	-195	-69																
25		-199	+166	+41	-223	+89	-32	-146	-89	+154	+248	-45	-564	-455	-345	-122	-8	+81	+223	+134	0	+211	+81	+142	-45	-29																
26		+288	-353	-179	-414	-325	0	-166	-37	+227	+374	-223	-386	-304	-219	-227	+134	+41	+304	-28	-207	+195	-183	+130	+61	-62																
27		-187	+341	-211	-767	-150	-69	0	-175	-207	+45	-69	-284	-520	-601	-309	-138	+414	0	+406	-382	+158	+49	-16	-256	-122																
28		-114	-179	+183	-341	+577	-89	-166	-227	-49	+268	+146	-512	-832	-438	-97	-102	+49	+77	+158	-171	0	-81	-118	-93	-90																
29		-166	-126	-130	-118	-130	-93	-77	+187	+203	+313	+187	-264	-260	-544	-641	-134	-183	-41	+203	-288	-49	-53	-81	-45	-97																
30		-300	-106	+16	-410	+77	+41	-20	+49	+97	+114	+77	-524	-564	-572	-313	-24	+126	-142	-16	-81	-37	-65	-49	-93	-113																
31		-93	-97	-130	-118	+37	-114	+97	+264	+268	+508	+61	-418	-568	-577	-430	-369	+8	+61	+158	-32	0	-203	-126	-24	-77																
MEANS		-135	-121	-110	-183	-110	-119	-53	+5	+110	+175	+72	-257	-362	-327	-193	-52	+35	+50	+16	-45	-12	-77	-81	-118	-79																
MEANS		-111	-110	-101	-112	-133	-118	-106	-52	+78	+127	+30	-207	-263	-172	-93	-60	-3	+10	-27	-36	-73	-110	-105	-105	-77																

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DECEMBER 1935

DECEMBER 1935

DAY	*	COMPONENT EASTWARD										LINE OW										LENGTH IN KMS										93.9										DIRECTION E 0° .5 N										MEAN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
1		+ 92	- 77	-263	0	- 77	-151	- 21	-278	-133	+607	+107	- 47	-118	-101	+189	- 27	- 15	- 33	-115	-192	+391	+ 59	- 56	- 41	- 12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
2		- 62	-145	-148	+231	-237	-435	+355	+ 12	+ 59	+115	+178	+ 95	- 30	-160	+110	+166	+373	+400	-394	- 33	+ 89	+101	+ 77	- 18	+ 29																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															</

* = 10 LEAST DISTURBED DAYS

TABLE 151

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHLY										LENGTH IN KMS 56.8										DIRECTION N 19° 5 E				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1	X	-162	-207	-215	-138	-414	-195	-183	-45	+134	+244	+73	-207	-524	-487	-410	-390	-114	-126	-49	-122	-65	-57	-73	-122	-161
2	X	-138	-89	-97	-49	-313	-577	-491	+244	+532	+252	+199	-390	-390	-451	-536	-248	-125	-73	-77	-73	-12	-37	-24	-32	-101
3	X	-37	-37	-41	-12	-77	-49	0	+292	+572	+524	+365	-102	-369	-621	-605	-321	-89	-122	-118	-41	-53	-73	-65	-49	-47
4	X	-81	-77	-49	-49	-77	-126	-130	+85	+325	+451	+390	+57	-426	-528	-420	-211	-122	-37	-45	-45	-102	-73	-85	-77	-61
5	X	-53	+142	-118	-227	-61	-57	-89	+126	+268	+410	+361	+45	-321	-512	-422	-284	-106	-85	-49	-81	-118	-138	-158	-126	-69
6		-77	-73	-106	+20	-77	-32	-24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	+134	+296	+171	+158	-276	-447	-564	-451	-248	-8	-8	+61	-41	-280	-114	-85	+171	..
8		+158	-207	-260	-69	-240	+162	-491	+179	+126	+244	+296	-300	-268	-260	-81	+41	+215	+73	+8	+122	-28	-85	-37	-166	-36
9		-142	-349	+179	-89	-65	-106	-130	+77	+138	+114	-37	-268	-365	-284	-195	-122	+37	-37	-85	+37	-93	-37	+69	-154	-79
10		-349	-146	-284	-394	+24	-329	+240	+77	+122	+85	+126	+75	-114	-524	-447	-138	0	+57	0	0	-122	-122	-122	-118	-100
11	X	-138	-77	-20	-65	-171	-215	-77	+183	+325	+49	+126	-268	-479	-382	-369	-118	-16	0	+223	0	+37	-166	-12	-61	-71
12		-280	-195	-41	-629	+37	-16	+138	+122	+207	+292	+187	-102	-81	-438	-524	-195	+12	+85	+292	+235	-187	-264	+41	+106	-50
13		-126	-430	-162	-12	-203	+16	-203	+146	+146	+134	-146	+77	-414	-552	-512	-195	-45	-20	+166	-53	-93	-175	-195	-455	-138
14		-207	-341	-126	0	-102	+41	-41	+150	+77	+211	+158	-284	-321	-447	-248	-122	-102	0	0	0	+32	-166	-130	-126	-87
15	X	-122	-284	-122	-106	-171	-158	0	+146	+288	+288	+199	-162	-406	-479	-589	-183	-49	-77	-85	-89	-61	-85	-118	-126	-106
16	X	-199	-171	-325	-85	-97	-118	-65	0	+138	+211	+122	-122	-304	-296	-321	-138	-77	-114	+32	+37	+73	+126	-97	-260	-85
17		-97	-207	-325	-142	-166	-122	-45	-158	-93	+65	+85	-16	-240	-325	-244	-130	-89	-300	-106	-4	+589	+260	-162	-276	-94
18		0	-203	+12	-771	+483	-629	+114	-325	-37	+122	-49	-126	-357	-288	-134	-284	+223	-227	+24	-20	-41	-73	-77	-130	-116
19		-85	-231	-93	-110	-130	-162	-114	-162	-244	+195	+122	-20	+37	-309	-280	-268	-158	+24	+41	-85	-118	-142	-122	-69	-103
20	X	-162	-280	-32	-122	-114	-166	-114	-171	-37	-45	0	-77	-154	-166	-487	-126	-146	+37	+20	-89	-85	-45	-73	-114	-114
21		-142	-154	-207	-195	-158	-93	-45	-61	-211	-118	-122	-158	-341	-57	-73	-4	+158	-102	+126	0	+49	-85	-118	-158	-95
22		-85	-325	+89	+73	-361	-122	-300	-248	-81	+231	+162	+16	-422	-447	-345	-175	+20	0	+126	+158	+142	+61	-284	-126	-93
23		+73	+223	-349	-280	-199	-122	-154	-122	-276	-166	-41	-102	-126	-203	-114	-203	+16	+41	-102	+171	-37	-49	-81	-195	-100
24		-183	-77	-89	-223	0	-122	-73	-32	+41	+154	+304	-288	-292	-560	-195	+633	+187	+89	+142	+142	+114	-158	+20	-150	-26
25		-41	+102	-300	+81	-223	-646	-154	+73	+386	-45	-81	-292	-325	-183	-126	-175	-49	+304	-8	-227	-89	0	-45	-288	-98
26		+235	-41	-134	-374	+195	-394	+45	-166	-81	+69	+65	-77	-244	-414	-77	-317	-89	-85	-8	+73	-118	-61	-32	-146	-91
27		-284	-61	-248	-114	-183	-89	+102	+45	+65	-12	-130	-475	-495	-195	-126	+77	-32	-166	-37	+256	-240	-138	0	+126	-98
28		-288	-374	-154	-162	-154	-106	-166	-73	-12	+110	+162	-41	-365	-236	-528	-369	-45	+130	+300	+471	+394	+325	+284	+317	-27
29	X	+252	+256	+110	+130	+154	+122	+158	+300	+512	+467	+223	-118	-162	-37	-118	+16	+244	+41	-57	+41	+41	+97	+199	+284	+136
30		-20	-215	+77	-179	+81	+191	+65	+114	-24	+171	+227	-175	-386	-187	-304	-235	+215	+195	+37	-12	-8	+32	+49	+24	-11
31		-97	-41	+89	+102	+85	-45	+154	+203	+175	+231	+158	-211	-292	-150	-406	..	..	..	..	..	..	..	..	..	..
MEANS		-97	-145	-119	-154	-97	-150	-79	+28	+119	+178	+121	-133	-309	-354	-316	-149	-4	-18	+25	+29	-7	-47	-52	-95	-76
MEANS		-84	-82	-91	-72	-134	-154	-99	+116	+310	+313	+211	-115	-354	-396	-429	-200	-60	-56	-20	-46	-34	-45	-51	-68	-68

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+ 42	+ 36	+ 62	+ 83	- 18	+ 62	+ 65	+ 143	+ 235	+ 350	+ 541	+ 345	+ 12	- 143	- 202	- 300	- 119	+ 27	+ 62	0	+ 48	+ 53	+ 77	+ 59	+ 63
2	X	+ 53	+ 62	+ 83	+ 98	+ 36	+ 33	+ 59	+ 154	+ 321	+ 457	+ 594	+ 353	+ 56	- 178	- 333	- 267	- 190	- 56	0	0	+ 33	+ 53	+ 53	+ 92	+ 65
3	X	+ 80	+ 59	+ 89	+ 95	+ 36	+ 42	+ 36	+ 196	+ 392	+ 478	+ 639	+ 478	+ 157	- 264	- 446	- 306	- 151	- 137	- 74	0	0	+ 53	+ 33	+ 65	+ 65
4	X	+ 56	+ 62	+ 62	+ 62	+ 33	0	- 36	+ 65	+ 196	+ 359	+ 511	+ 511	+ 134	- 175	- 202	- 104	- 116	- 24	+ 33	+ 30	0	+ 48	+ 33	+ 45	+ 66
5	X	- 27	+ 315	+ 45	- 74	0	+ 59	- 18	+ 98	+ 146	+ 356	+ 511	+ 410	+ 98	- 166	- 214	- 172	- 59	- 89	- 33	- 18	- 15	- 30	+ 18	+ 47	
6		- 59	+ 33	0	+ 122	+ 39	+ 56	+ 71	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	+ 163	+ 279	+ 249	+ 389	+ 181	- 74	- 291	- 282	- 193	- 6	+ 89	+ 107	+ 33	+ 220	+ 18	+ 386	+ 440	..
8		+ 193	- 24	- 131	- 15	- 74	+ 151	- 157	+ 178	+ 140	+ 336	+ 603	+ 157	- 45	- 104	- 83	+ 33	+ 297	+ 92	- 30	+ 249	+ 36	+ 39	+ 172	- 137	+ 78
9		- 104	- 122	+ 214	- 45	- 9	- 33	- 83	+ 59	+ 252	+ 92	+ 172	+ 89	- 30	+ 89	- 148	- 157	- 27	- 95	- 178	+ 48	- 24	+ 86	+ 154	- 45	+ 6
10		- 211	- 53	- 166	- 416	- 12	- 74	+ 107	- 36	+ 56	+ 137	+ 368	+ 618	+ 110	- 502	- 416	- 166	- 89	+ 62	0	0	- 107	- 53	0	- 27	- 36
11	X	- 36	- 74	+ 9	+ 30	- 89	- 89	- 202	+ 107	+ 193	+ 56	+ 472	+ 27	- 143	- 196	- 330	- 166	- 62	- 30	+ 196	0	- 205	0	+ 122	- 77	- 20
12		- 86	- 119	- 18	- 407	- 71	+ 190	+ 175	- 273	- 71	+ 327	+ 383	+ 294	+ 315	- 223	- 535	- 478	- 146	+ 15	+ 342	+ 261	- 131	- 267	+ 134	+ 137	- 10
13		- 9	- 244	- 151	- 86	- 157	- 36	- 86	+ 59	+ 175	+ 98	+ 151	+ 564	+ 39	+ 249	- 487	- 312	- 107	- 36	+ 205	- 27	- 92	- 119	- 71	- 297	- 32
14		- 190	- 181	- 119	- 71	+ 27	0	- 143	+ 30	- 59	+ 244	+ 443	+ 80	- 42	- 193	- 193	- 104	- 143	- 59	- 59	- 71	+ 68	- 101	- 59	- 33	- 39
15	X	- 30	- 202	+ 27	- 107	- 74	- 175	- 116	0	+ 104	+ 312	+ 362	+ 178	- 33	- 282	- 505	- 190	- 143	- 119	- 104	- 59	+ 9	- 6	- 30	- 59	- 52
16	X	- 89	- 62	- 208	- 53	- 62	- 71	- 39	- 27	+ 9	+ 148	+ 303	+ 205	- 15	- 122	- 166	- 89	- 104	- 163	+ 24	+ 83	+ 122	+ 264	+ 6	- 202	- 13
17		- 89	- 86	- 279	- 89	- 116	- 86	- 86	- 235	- 220	- 50	+ 163	+ 175	+ 24	- 101	- 146	- 74	- 116	- 353	- 92	+ 131	+ 508	+ 386	+ 101	- 279	- 42
18		+ 89	- 205	- 101	- 541	+ 252	- 428	+ 45	- 187	- 154	+ 131	+ 440	+ 315	- 226	- 125	- 39	- 143	+ 119	- 226	- 27	0	- 71	+ 53	0	- 92	- 47
19		- 59	- 220	- 62	- 30	- 86	- 122	- 45	- 178	- 122	+ 131	+ 196	+ 205	+ 478	- 172	- 208	- 300	- 190	+ 53	+ 50	- 56	- 59	- 68	- 15	+ 18	- 36
20	X	- 128	- 223	+ 15	- 39	- 30	- 131	- 74	- 9	0	+ 62	+ 101	+ 244	+ 249	+ 196	- 279	- 178	- 226	+ 62	- 12	- 116	- 74	+ 62	- 74	- 59	- 28
21		- 89	- 89	- 143	- 119	- 113	- 53	- 36	- 131	- 273	- 137	+ 6	+ 122	- 125	+ 113	+ 160	+ 92	+ 401	+ 110	+ 187	+ 65	+ 92	0	- 95	- 95	- 6
22		- 89	- 276	+ 30	+ 62	- 386	- 65	- 190	- 235	- 143	+ 71	+ 160	+ 220	- 110	- 169	- 146	- 154	+ 77	- 48	+ 71	+ 45	+ 220	- 62	- 220	- 187	- 64
23		0	+ 288	- 264	- 220	- 172	- 95	- 166	- 134	- 327	- 160	+ 27	+ 56	+ 74	- 24	- 62	- 148	+ 27	+ 211	+ 119	+ 95	- 104	- 39	0	- 39	- 44
24		- 134	- 45	- 154	- 226	- 9	- 89	- 9	- 42	- 39	- 27	+ 627	+ 451	+ 359	- 143	+ 154	+ 725	+ 193	+ 95	- 42	- 56	- 45	- 362	+ 306	- 62	+ 59
25		+ 104	+ 154	- 255	- 27	- 125	- 552	- 264	- 77	+ 291	+ 9	+ 116	+ 12	- 86	- 92	- 122	- 116	+ 92	+ 544	+ 9	- 303	- 89	+ 27	- 50	- 270	- 45
26		+ 140	0	- 77	- 419	- 163	+ 39	- 178	- 74	- 12	- 56	+ 78	+ 172	+ 71	- 119	+ 131	- 546	- 119	- 9	- 86	+ 9	- 27	- 48	- 119	0	- 59
27		- 154	- 95	- 104	- 86	- 160	- 86	+ 24	- 148	- 62	+ 6	+ 95	- 36	- 163	- 116	- 74	+ 294	- 56	- 62	+ 33	+ 386	- 279	+ 83	+ 89	+ 270	- 17
28		- 143	- 181	- 89	- 119	- 86	- 89	- 143	- 157	- 74	+ 116	+ 359	+ 380	+ 148	- 33	- 428	- 226	- 48	+ 12	+ 140	+ 425	+ 339	+ 324	+ 270	+ 315	+ 43
29	X	- 169	+ 238	+ 62	+ 74	+ 24	+ 9	- 24	+ 24	+ 134	+ 365	+ 371	+ 151	+ 122	+ 9	- 157	+ 15	+ 163	- 71	- 24	- 36	- 30	+ 104	+ 300	+ 297	+ 81
30		+ 86	- 92	+ 220	- 6	+ 92	+ 324	+ 131	+ 143	- 18	+ 83	+ 419	+ 178	+ 6	+ 45	- 89	- 160	+ 116	+ 220	+ 68	- 104	- 59	+ 39	+ 89	+ 104	+ 76
31		+ 86	+ 92	+ 131	+ 148	+ 89	+ 86	+ 98	+ 30	+ 62	+ 166	+ 264	+ 181	+ 24	+ 134	- 208	+ 68	- 59	+ 98	- 62	- 30	+ 92	+ 59	+ 116	+ 9	+ 70
MEANS ALL DAYS		- 31	- 44	- 44	- 81	- 49	- 44	- 47	+ 23	+ 39	+ 154	+ 327	+ 246	+ 50	- 97	- 199	- 125	- 27	+ 1	+ 25	+ 33	+ 5	+ 20	+ 45	- 18	+ 5
MEANS 10 DAYS		- 25	+ 21	+ 25	+ 17	- 14	- 26	- 35	+ 75	+ 173	+ 294	+ 440	+ 290	+ 64	- 132	- 283	- 176	- 101	- 60	+ 7	- 12	- 12	+ 62	+ 49	+ 18	+ 27

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 153

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

FEBRUARY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE OM			LENGTH IN KMS 56.8										DIRECTION N 19° 5 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24										
1		..	..	..	..	..	..	+ 85	+122	+ 77	- 12	-134	-288	-175	-382	-118	+ 16	- 85	- 24	- 41	- 49	- 49	- 45	- 37	..				
2		- 8	-146	+ 8	+ 8	- 85	- 41	+ 41	+ 65	+183	-118	+ 24	-166	-382	+ 41	+ 57	- 41	+171	-248	-122	0	+ 45	- 12	+ 16	+223	- 20									
3		- 85	0	-248	-102	+ 24	- 16	- 65	0	- 41	- 45	-227	-357	-341	-118	-280	+ 73	+ 12	- 81	+ 12	+118	- 16	- 16	-150	- 37	- 83									
4		+ 49	-304	+406	-244	0	-106	- 45	- 41	-154	+ 24	-321	-280	-256	- 24	+ 85	+ 45	+ 41	- 81	-118	- 61	+ 41	+ 8	+ 32	-284	- 69									
5	X	-211	- 85	- 97	- 61	- 61	-183	-179	+276	+248	0	- 77	-394	-613	-406	- 57	- 65	0	+ 41	+ 45	+ 45	+ 12	- 77	- 53	-126	- 87									
6	X	-162	-240	-215	-122	-102	-126	-134	-106	- 97	- 37	-321	-438	-333	- 45	+207	+215	+ 81	- 45	- 37	- 41	- 45	- 81	- 45	-235	-104									
7	X	-162	- 49	+ 8	- 49	- 45	- 45	0	+ 45	+ 77	+174	- 49	-483	-682	-447	-195	+ 81	+122	+ 41	0	- 45	- 49	-142	-166	- 85	- 89									
8		-211	- 81	-166	- 85	- 41	- 81	- 85	+ 24	- 73	-240	-126	-329	-284	+ 16	+ 97	- 12	- 37	0	+118	+ 89	+540	-219	-309	-264	- 74									
9		-248	-146	-187	-102	- 97	-207	+ 61	- 41	+126	- 49	+142	-195	-329	- 37	-118	+ 12	+207	+183	- 28	+268	-118	-118	0	-365	- 58									
10		-154	- 97	-187	-337	+ 89	-12	+ 24	+166	+223	+187	-577	-568	-406	-410	+252	+447	+ 69	+ 65	-138	- 32	+ 73	+171	-227	-158	- 64									
11	X	-166	-195	-304	-183	+ 24	+ 81	+ 97	+256	+ 85	+ 45	- 85	-146	-325	-365	-207	-122	-227	-227	- 81	- 49	0	- 12	-183	- 65	- 98									
12	X	-154	-244	-203	- 45	- 77	-118	+ 97	+203	+ 20	- 49	- 81	-244	-438	-406	-215	-114	+ 41	- 45	- 24	- 32	- 32	- 57	- 24	- 77	- 97									
13	X	-122	-179	-154	- 93	-142	-288	- 85	+300	+284	+126	-150	-560	-674	-438	-158	- 20	- 8	-118	- 41	- 45	- 32	- 41	- 85	-199	-122									
14		-118	-162	-223	-609	+158	- 93	- 61	+589	+893	-589	-106	-191	-240	-491	-276	- 61	-138	- 65	+106	+ 61	- 37	-122	- 73	- 77	- 80									
15	X	- 81	-146	-118	- 85	- 89	+ 20	-203	+ 93	+118	-731	-211	-341	-357	-130	-114	- 37	+ 24	- 41	- 85	- 37	0	- 65	- 85	- 32	-114									
16		-288	- 37	-166	-256	-1746	+157	+ 85	-191	-491	+ 81	-240	-572	-236	-219	+130	+122	+ 73	- 73	+341	- 65	+158	- 85	+ 65	0	-104									
17		+ 49	-142	+122	+118	-134	+248	-154	+447	-650	+158	- 81	+ 81	+183	- 24	+280	+235	+142	-171	- 73	-134	-248	-166	-158	- 81	- 6									
18	X	-353	+ 65	- 41	-142	- 57	+ 24	- 41	+ 81	+126	-240	-564	-528	-300	- 61	+ 49	+126	- 37	-118	0	+ 85	- 8	+ 41	-126	+ 49	- 82									
19		-292	+ 93	+ 61	+142	-313	+158	+337	+288	+ 49	-678	-369	-329	- 53	- 65	+244	+382	+118	- 45	+207	-219	-199	-142	-199	-162	- 41									
20		- 32	-175	-138	- 89	- 37	+ 37	+ 89	+211	+ 65	-171	-487	-560	-333	-158	- 20	+138	+ 85	+ 41	+114	-244	- 32	+ 77	+ 81	-690	- 93									
21		+341	-102	+ 41	- 45	-235	-325	-114	+520	+154	-365	-122	-544	-528	+183	+304	-138	- 49	+ 65	- 12	-191	+195	+422	-309	-175	- 43									
22		+ 57	-154	+325	-211	-207	- 81	+195	-365	-386	-138	-487	-406	-300	-118	+345	- 49	- 8	- 49	+122	- 61	+154	-244	-183	-134	- 99									
23		-162	- 37	-288	- 73	- 41	+ 73	-187	+ 41	-191	-361	-572	-329	-130	-162	- 49	+284	+402	+ 8	+ 45	+130	+ 37	-106	-187	-118	- 82									
24	X	-207	-171	- 77	- 77	-130	- 37	+325	+264	+122	-341	-605	-491	-426	-207	- 89	+ 12	-158	- 85	-118	+122	-146	-102	-122	-139										
25		-114	- 93	- 77	-118	-138	- 85	+ 49	+491	+548	-528	-390	-426	-345	-284	- 32	-162	- 89	+102	+ 61	- 37	+ 45	+195	-142	+ 16	- 65									
26		-211	-166	- 81	-422	+248	+235	0	+138	+166	+ 97	-227	-386	-240	-447	-341	-219	+102	- 41	- 24	+219	-130	- 45	-102	-268	- 89									
27		+ 16	- 81	-382	- 37	- 16	-126	-248	+410	+ 61	+280	- 32	-382	-495	-309	-321	- 45	-158	-122	-122	-106	- 97	- 20	-134	-118	-108									
28	X	-162	-122	- 81	-158	- 81	- 45	+ 32	+ 32	+ 77	-130	-252	-288	-252	-138	-248	- 89	-166	-114	- 61	- 85	- 81	-118	-126	- 73	-114									
29		- 89	- 77	-179	+ 20	- 89	- 73	0	+455	- 37	-288	-467	-536	-394	-361	-150	+ 53	+ 8	-106	- 49	- 81	- 89	+122	- 61	-162	-110									
MEANS		-117	-117	- 94	-123	-122	- 2	- 6	+166	+ 54	-140	-252	-371	-340	-201	- 29	+ 38	+ 22	- 47	+ 1	- 15	- 6	- 34	-109	-136	- 83									
MEANS		-178	-137	-128	-102	- 76	- 72	- 9	+144	+106	-118	-240	-391	-440	-264	-103	- 1	- 33	- 71	- 40	- 8	- 38	- 65	-102	- 96	-103									

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° .5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+ 15	- 12	+ 12	+ 42	+ 15	+ 92	- 30	0	+ 62	+122	+261	+208	0	- 146	- 68	- 27	- 27	+ 33	0	- 27	- 9	0	+ 30	+ 23						
2		+ 30	- 18	+ 56	+ 59	+ 6	+ 59	+146	+113	+ 53	- 36	+193	+241	- 45	+178	+202	+374	-181	- 27	+ 53	+151	- 24	-279	+454	+ 82						
3		- 53	+ 42	-107	- 86	+ 15	- 18	- 62	+ 18	+ 18	+131	+107	- 6	-169	- 71	-166	+ 18	+ 39	+ 30	+ 48	+208	+113	- 24	- 27	+ 74						
4		- 48	-217	+398	-214	+128	- 30	- 21	+ 15	-107	+ 71	- 48	-125	-131	+ 48	+166	+193	+205	+ 33	- 48	0	+113	+113	+ 74	-137						
5	X	- 50	+ 18	- 83	- 30	- 30	- 86	- 15	+187	+303	+235	+178	-119	-356	-294	- 45	- 77	+ 33	+148	+ 62	+ 95	+ 92	+ 18	+ 33	- 6						
6	X	- 62	-107	-148	- 77	- 71	- 89	- 92	-151	-151	+ 42	- 9	- 98	- 83	+ 33	+205	+232	+146	+ 30	- 15	+ 9	+ 53	+ 56	+ 89	- 74						
7	X	-110	0	+ 30	- 33	0	+ 30	+ 68	+ 62	+119	+288	+297	+ 24	-371	-339	-104	+ 36	+143	+148	+ 89	- 36	+ 33	- 18	- 30	+ 33						
8		-107	- 36	- 74	- 18	- 30	- 53	- 56	- 33	- 86	-134	+ 98	+ 65	+ 59	+226	+178	0	+ 18	+ 53	+178	+175	+359	+ 59	-119	- 42						
9		- 83	- 27	-134	- 59	- 27	-223	+ 62	+ 27	+ 92	+148	+300	+ 30	-146	+202	-134	+ 68	+ 83	+312	+ 42	+261	- 48	- 12	+113	-154						
10		- 89	- 18	-110	-151	-137	+ 21	+ 71	+ 33	+330	+386	-119	-211	- 89	-258	+404	+342	- 65	+116	-181	- 24	+143	+134	-270	+134						
11	X	- 27	- 74	-169	- 77	+ 71	+ 45	+160	+178	+ 95	+122	+125	+107	-101	-148	- 48	- 59	-178	-146	- 83	- 6	+ 33	+ 74	+ 6	+ 53						
12	X	+ 27	- 36	- 48	+104	+ 33	+ 48	+143	+178	+104	+128	+223	+134	- 95	-154	- 89	-342	- 50	- 48	- 12	+ 27	+101	+ 89	+ 95	+101						
13	X	+ 59	- 45	- 36	+ 15	0	- 18	+ 62	+297	+353	+342	+178	-137	-282	-223	- 56	+ 68	+ 77	+ 62	+ 39	+ 62	+151	+151	+ 59	+ 92						
14		-116	+ 59	-116	-160	+ 89	- 15	+ 42	+564	+025	+ 39	+199	+151	+116	- 80	- 33	+ 77	- 59	+ 33	+134	+309	0	- 68	+ 45	+ 89						
15	X	+ 59	+ 30	+ 33	+ 12	- 24	+151	+ 92	+ 86	+312	-324	+ 71	+ 45	+ 27	+226	+330	+261	+309	+244	- 27	+181	+172	+119	+ 89	+148						
16		- 56	+ 62	+ 62	- 71	-941	+778	+119	+238	-137	+172	+107	-315	- 48	+154	+196	+113	+143	+196	+639	- 45	+196	+ 42	+ 83	+205						
17		+ 83	-353	+232	+169	-327	+339	- 80	+244	-255	+457	+220	+368	+374	- 48	+359	+362	+193	+ 89	+ 18	- 92	-178	- 36	+ 24	+ 62						
18	X	-202	+208	+ 89	+ 15	+107	+172	+ 95	+235	+273	+148	-157	-220	-137	+ 39	+113	+208	+ 92	+ 30	+148	+202	+208	+ 83	- 15	+172						
19		- 27	+ 59	+172	+181	-181	+205	+211	+359	+258	- 24	-134	0	+359	+249	+339	+460	+104	- 42	+196	-217	-148	- 12	- 59	+ 12						
20		+ 62	+ 18	- 33	+ 36	+ 77	+143	+181	+202	+223	+ 59	-143	- 92	- 12	+ 65	- 21	+178	+190	+217	+143	-113	+125	+356	+ 95	-333						
21		+383	+ 71	+116	+143	+196	-267	+223	+235	+160	+116	+354	- 30	-208	+600	+345	- 30	+ 59	+270	+146	-288	+472	+244	- 56	- 56						
22		+184	-350	+671	+ 12	- 30	+ 45	+342	- 65	-113	-151	-172	+ 6	+143	+214	+594	- 36	+ 33	+ 62	+ 83	+ 83	+297	- 36	- 39	- 74						
23		+ 83	+122	- 45	- 9	+122	+119	+131	+ 36	+ 45	+ 48	-214	- 48	+327	-172	+166	+448	+683	+ 53	+175	+267	+ 48	- 74	- 56	+ 53						
24		- 27	- 30	+ 33	+ 9	- 6	+ 36	+321	+255	+238	+ 42	-166	-134	-122	+ 45	+217	+ 53	- 6	+ 62	0	+104	- 6	+ 36	+ 36	+ 83						
25	X	+ 62	+ 92	+ 42	+ 71	- 9	+ 12	+279	+460	+490	-172	- 48	+ 71	+178	+107	+160	-131	+ 92	+258	+137	+ 39	+270	+371	-134	+131						
26		- 24	0	+ 56	-181	+191	+264	+208	+ 62	+279	+416	+353	+140	+303	+128	-252	-137	+318	+122	+ 77	+217	-175	- 45	- 74	-151						
27		+193	+ 86	-223	+ 86	+ 92	+ 92	- 89	+359	+146	+389	+356	+ 71	-113	+ 36	0	+131	+122	- 36	-107	- 12	+ 33	+101	- 33	+ 56						
28	X	+ 18	+ 33	+ 62	0	+ 18	+ 83	+ 86	0	+ 50	0	- 27	+ 86	+148	-211	- 6	+125	0	+ 62	+ 53	+ 62	+ 62	+ 62	+ 59	+ 92						
29		+ 92	+ 92	- 15	+166	+ 62	+ 56	+154	+300	+270	- 74	-151	- 83	- 62	- 30	+143	+362	+ 36	- 15	+ 15	+ 24	+ 30	+267	+ 92	+ 21						
	MEANS ALL DAYS	+ 9	- 11	+ 25	- 2	- 21	+ 67	+ 95	+155	+153	+103	+ 77	+ 4	- 18	+ 33	+104	+106	+107	+ 74	+ 67	+ 53	+ 92	+ 70	- 7	+ 37	+ 57					
	MEANS 0 DAYS	- 32	- 0	- 24	- 6	+ 10	+ 31	+ 92	+133	+170	+102	+ 71	- 31	-137	- 60	+ 52	+ 50	+ 57	+ 59	+ 25	+ 70	+ 90	+ 67	+ 42	+ 69	+ 38					

[illegible]

TABLE 155

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

MARCH 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION										N 19° 5' E	MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1		- 41	-422	+ 89	- 24	- 81	-126	- 61	+235	+158	-240	-374	-353	-357	-199	-187	- 97	-142	-154	-195	-118	- 85	- 61	- 77	-158	-128							
2	X	-142	-154	-158	-126	- 85	- 41	+ 8	+195	+134	-357	-443	-451	-443	-296	- 73	-106	+ 73	- 28	- 89	- 81	- 73	-122	- 85	-162	-129							
3	X	-114	-126	-122	-126	-106	- 73	+ 45	+357	+142	-390	-650	-641	-443	-252	-126	+ 37	+158	+ 20	- 73	- 37	-118	- 65	-122	-126	-123							
4	X	-154	-130	- 97	-126	- 41	- 20	+142	+524	+349	-179	-605	-706	-702	-329	+ 20	+ 32	+ 81	+118	+130	-12	- 61	- 85	-118	- 32	- 83							
5	X	- 85	- 77	-102	-130	-106	- 41	+134	+329	+179	- 57	-369	-605	-605	-365	- 85	- 8	+ 85	+ 77	- 37	- 16	- 41	- 49	-118	- 97	- 91							
6		-162	-118	-122	+ 61	0	-195	+122	+430	+524	+179	- 97	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		-122	-118	-158	-240	+203	+ 97	+ 89	+487	+134	- 61	-118	-329	-329	-195	- 65	-114	-179	0	+ 61	+ 12	-122	-118	-118	-183	- 62							
9		-179	-166	-130	-106	+ 20	- 73	+146	+329	+532	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	+406	+398	+102	-374	-491	-532	-524	-361	-207	- 41	- 45	+ 8	- 41	- 77	- 53	-122	-130	..
11	X	-158	-166	-158	-106	-126	- 85	+ 97	+361	+552	+398	-268	-572	-568	-491	-418	-235	-122	- 49	- 81	- 89	- 37	- 41	- 49	-158	-107							
12	X	-122	-162	- 85	-118	- 89	- 24	0	+203	+414	- 45	-333	-455	-341	-378	-414	-223	+ 12	+ 41	- 37	-102	-114	- 49	- 41	-101	-101							
13	X	- 49	-199	- 32	-106	- 77	-114	- 85	+183	+203	- 89	-260	-333	- 85	-248	-325	-106	- 37	- 12	- 45	- 97	-126	- 32	- 37	- 77	- 91							
14		- 53	-276	+158	-134	-122	-122	- 61	+130	+248	+126	-240	-479	-414	-349	-199	-248	+ 16	+158	+122	+ 85	+ 65	- 89	- 53	- 65	- 75							
15		-390	+280	- 65	-187	-175	- 20	+ 85	+130	+288	-142	-264	-390	-426	-443	-235	0	+ 37	- 37	- 24	- 73	-126	+227	-142	0	- 87							
16		-118	-183	-158	-118	-126	- 57	+ 77	+138	+146	-130	-430	-483	-349	-296	-292	- 77	- 24	+ 37	0	+227	- 37	-162	- 8	0	-101							
17		+ 4	+ 41	- 24	-114	-114	-102	+ 49	+300	+187	-146	-248	-455	-406	-231	-203	-114	+187	- 81	- 89	+ 69	-130	-126	- 81	- 49	- 78							
18		-260	- 16	+126	- 57	-211	- 24	+244	+264	+ 65	-118	-313	-495	-455	-264	- 69	+ 32	+280	+ 37	+ 45	+ 45	- 81	-280	-118	-122	- 73							
19		-524	+ 81	- 45	+ 45	-138	-158	+252	+443	+102	-329	-520	-402	-280	-426	-138	-142	0	+130	-146	+122	+207	+ 20	- 49	-528	-101							
20		+280	+166	+195	-321	-199	-609	+ 41	+629	+215	-162	-447	-467	-365	-244	-158	+ 73	-130	- 41	+248	- 16	+ 24	+ 41	- 49	-739	- 85							
21		+568	- 93	- 89	-483	+114	0	+ 61	+374	+260	+110	-215	-361	-215	-451	-369	+ 20	+142	+410	+491	-321	-191	-118	-106	-175	- 27							
22		-219	-158	-114	- 53	-179	-240	+ 28	+560	+613	+329	-146	-451	-849	-410	-508	-288	+102	+179	+166	+349	+467	+365	+179	+325	+ 2							
23		-727	+398	+130	-227	-443	+268	+280	+434	+686	+244	-467	-162	-767	-585	-402	-219	+ 77	+244	+288	-154	+288	- 41	+548	-378	- 29							
24		+207	-219	+ 37	-199	- 77	0	-244	- 65	+406	+512	+ 69	-203	-357	-646	-166	-280	- 77	+333	-183	+471	-321	-203	-142	- 65	- 59							
25		-130	-240	+ 41	-126	-264	- 41	+162	+483	+536	+179	-118	-211	-390	-475	-508	- 57	- 65	+260	+564	+138	-199	-162	+162	-166	- 26							
26		-272	-142	-235	- 81	-138	+ 41	+146	+288	+321	+ 97	-171	-264	-321	-487	-487	+ 8	-276	- 16	- 57	+ 77	- 16	-203	-179	-280	-110							
27		+118	- 20	- 16	- 37	-296	+244	+114	+357	- 20	-146	-503	-374	-106	-304	-199	- 20	- 57	+ 41	+365	+ 65	-142	- 61	-187	-321	- 63							
28	X	-235	-162	-166	-195	-130	-106	+146	+455	+211	-203	-451	-447	-374	-430	-398	- 32	-122	-122	+ 41	+171	+183	- 53	+166	+118	- 89							
29	X	-106	-166	+114	-199	- 37	- 85	0	+118	+ 8	- 8	-199	-292	-349	-284	-459	-280	-154	-32	+ 16	- 41	+ 45	- 45	+ 77	- 53	-100							
30	X	-256	- 37	- 65	-199	- 97	-142	+ 93	+369	+292	- 65	-374	-447	-414	-532	-443	-244	- 85	+166	- 41	- 41	0	+ 8	+106	-12	-102							
31		-102	+390	- 49	- 93	-256	- 85	+ 73	+142	+ 20	- 85	-475	-686	-475	-280	-130	-130	-102	- 8	- 65	- 77	-118	- 77	-122	- 61	-119							
MEANS		-119	- 71	- 39	-144	-126	- 62	+ 71	+312	+254	- 32	-331	-426	-414	-366	-261	-104	- 12	+ 62	+ 51	+ 21	- 32	- 59	- 28	+ 34	- 83							
MEANS 10 DAYS		-142	-138	- 87	-143	- 89	- 73	+ 88	+309	+248	- 90	-395	-494	-432	-360	-272	-116	- 11	+ 18	- 22	- 34	- 34	- 53	- 22	- 64	-102							

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°. 5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+ 50	-166	+166	+151	+ 33	+ 12	- 27	+148	+101	-119	- 86	+ 45	+ 86	+137	+ 86	+ 48	- 24	- 6	- 9	- 18	+ 27	+116	+104	- 62	+ 33						
2	X	- 33	- 36	- 53	- 33	+ 30	+ 62	+101	+205	+205	- 62	-116	- 86	- 24	+ 15	+116	0	+104	+ 45	0	0	+ 27	0	+ 62	0	+ 22						
3	X	+ 24	+ 15	+ 12	+ 36	+ 56	+ 86	+148	+350	+264	- 74	-172	-205	-143	- 27	0	+ 95	+208	+151	+ 74	+ 83	+ 9	+ 18	+ 39	0	+ 44						
4	X	- 18	- 39	- 27	- 36	+ 45	+ 48	+125	+380	+359	+ 65	-193	-241	-267	-122	+116	+ 65	+ 92	+157	+330	- 27	- 45	- 30	- 48	+ 56	+ 31						
5	X	- 6	+ 45	- 45	- 89	-116	+ 30	+143	+285	+279	+146	- 86	-148	-294	- 83	0	- 48	+ 36	+ 71	0	+ 45	+ 30	+ 30	- 6	- 45	+ 7						
6		- 74	- 36	- 62	+ 53	+ 83	- 86	+ 48	+202	+371	+342	+116	0	- 53	+148	-181	+386	-294	-205	0	- 9	- 9	- 36	+ 53	+104	+ 36						
7		- 89	-119	-104	- 30	- 74	- 86	- 86	+303	+386	+282	+ 18	-208	-202	-244	-238	-163	- 89	+ 62	+ 36	- 62	+ 83	+116	- 80	- 42	- 26						
8		- 74	-131	-119	-196	+157	+125	+ 92	+371	+443	+ 89	+ 36	- 6	- 45	+ 74	+181	+ 15	-258	- 77	+ 62	+ 59	- 86	- 59	- 65	-119	+ 20						
9		- 89	-107	- 92	- 95	+125	-333	- 27	+128	+389	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	+ 33	+392	+122	-119	- 36	- 62	-223	-205	-172	- 89	- 62	+ 30	- 9	- 36	+ 9	- 24	- 36	..
11	X	- 65	-101	- 95	- 27	- 65	- 45	+ 45	+146	+342	+350	- 24	- 59	- 95	-140	-249	-184	-146	- 42	- 42	- 92	0	+ 53	+ 15	- 89	- 25						
12	X	- 59	- 48	- 59	- 89	- 89	- 24	- 27	+122	+270	+169	0	+ 30	+ 65	- 92	-303	-267	- 65	+ 39	+ 9	- 56	- 56	+ 9	+ 77	+ 53	- 16						
13	X	+ 24	-226	0	- 27	- 33	- 89	-107	+ 33	+ 92	- 56	-101	+104	+463	+151	-151	- 83	- 56	- 18	0	- 56	-146	+ 24	+ 36	0	- 9						
14		+ 27	-339	+101	- 12	- 30	- 56	- 56	0	+ 59	+116	- 33	-247	-151	- 27	+ 83	- 42	+193	+330	+163	- 18	-113	+ 33	+ 27	- 30	- 1						
15		-487	+353	+ 89	-125	-122	+ 3	+ 15	+ 42	+175	+101	+ 50	0	-148	-252	- 62	+119	+ 68	- 30	- 39	- 62	- 86	+226	- 68	+ 62	- 7						
16		- 83	-131	- 92	- 83	- 74	- 30	+ 71	+ 83	+ 92	- 62	- 86	- 21	+ 62	+ 33	-137	-101	- 30	+ 15	+ 89	+401	- 92	-122	+ 6	0	- 12						
17		..	..	..	..	..	..	..	..	+ 62	+ 6	- 89	0	+ 30	+220	+ 42	- 59	+ 95	+ 27	+110	- 53	- 59	-151	- 33	+ 15	..
18		- 86	- 56	+151	+ 56	-154	- 18	+ 86	+148	+119	+ 30	+ 59	+134	+154	- 15	- 62	+ 33	+151	+ 36	+ 83	+ 98	-149	-122	- 53	+ 45	+ 24						
19		-368	+ 65	- 39	+125	- 30	-101	+107	+247	+160	-128	-178	+ 30	+131	-116	- 65	-148	+ 71	+134	+ 6	+ 92	+172	+380	+ 56	-178	+ 18						
20		+232	+ 53	+ 62	- 86	-208	-368	- 62	+443	+398	+401	-146	-181	-104	- 86	+104	+353	+137	+134	+134	+202	+ 24	- 42	0	-624	+ 32						
21		+327	- 53	-446	-389	+249	+166	+146	+345	+220	+208	+ 27	+ 24	+232	- 89	-208	- 92	+101	+261	+267	-353	-244	-160	- 3	- 86	+ 19						
22		-148	- 68	- 42	- 27	- 59	- 77	- 95	+267	+386	+389	+125	+229	-383	- 18	-680	-356	0	+ 59	+ 62	+327	+478	-451	+624	+440	+ 41						
23		-600	+309	+113	- 77	-282	+ 92	+140	+306	+650	+523	0	+252	-350	-431	-223	-122	+137	+232	+261	-134	+350	-223	-208	+119	+ 35						
24		+309	-169	+ 48	- 77	-128	- 30	- 71	-226	+ 92	+356	+235	+327	+327	-104	+116	-229	- 39	+238	0	+ 74	-345	-223	-113	- 9	+ 15						
25		-202	-137	+104	- 71	-122	- 30	+146	+211	+327	+184	+119	+175	+ 74	-128	-190	+ 77	+ 89	+264	+131	+119	- 18	-208	- 42	+163	+ 43						
26		-297	-113	-119	- 12	- 30	+ 27	+ 45	+202	+255	+166	+ 65	+122	+149	- 27	-119	+131	-315	- 15	- 39	+ 42	- 9	-238	-214	-520	- 36						
27		+113	- 53	- 18	- 68	-190	+229	+134	+178	+ 30	- 62	- 36	- 6	+220	- 48	- 9	+116	- 30	+258	+252	+ 80	-116	-104	-163	-306	+ 17						
28	X	-202	-134	-125	-146	- 86	-119	- 12	+264	+178	-113	-178	- 83	+ 48	-193	-190	- 12	-119	- 95	- 56	+244	+223	+163	+ 92	+119	- 22						
29	X	-160	- 95	-125	-119	- 39	-116	-113	+ 33	+ 59	+ 86	+ 9	+ 65	+ 77	0	-264	-181	-119	- 30	+ 15	+ 18	+ 89	- 83	+ 24	- 30	- 42						
30	X	-362	+ 62	- 86	-151	-101	-134	- 18	+235	+241	+ 74	-104	- 92	- 53	-205	-226	-154	- 92	+211	-169	- 36	+ 30	+ 33	+ 92	- 15	- 42						
31		-134	+383	+ 45	- 48	-285	- 53	- 18	+122	- 36	- 89	-193	-255	-151	- 18	- 30	- 53	- 27	0	- 56	- 24	- 33	0	- 62	- 24	- 43						
MEANS ALL DAYS		- 87	- 34	- 27	- 57	- 59	- 21	+ 32	+194	+233	+118	- 31	- 11	- 14	- 68	- 99	- 28	- 11	+ 78	+ 56	+ 33	0	- 32	+ 6	- 40	+ 5						
MEANS 10 DAYS		- 86	- 56	- 60	- 68	- 40	- 30	+ 28	+205	+229	+ 58	- 96	- 72	- 22	- 70	-115	- 77	- 16	+ 49	+ 16	+ 12	+ 16	+ 22	+ 38	+ 5	- 5						

* = 10 LEAST DISTURBED DAYS

TABLE 157

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										LENGTH IN KMS 56.8										DIRECTION N 19°.5 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1		- 73	+ 93	- 114	- 179	- 85	- 77	+ 171	+ 568	+ 195	- 410	- 118	- 219	- 288	- 138	+ 114	- 73	- 65	- 166	+ 166	- 73	- 89	- 171	- 106	- 199	- 56			
2		- 199	- 45	- 32	- 57	- 73	+ 61	+ 126	+ 483	+ 32	- 434	- 605	- 483	- 455	- 459	+ 463	- 374	- 24	+ 41	+ 61	- 20	- 187	- 118	- 81	- 57	- 102			
3		+ 106	- 40	- 138	- 41	+ 61	- 37	+ 410	+ 731	+ 187	- 114	- 475	- 304	- 455	- 260	- 191	- 24	+ 280	+ 162	- 171	- 183	- 61	+ 102	- 126	- 414	- 41			
4	X	- 183	+ 166	- 138	- 154	- 77	- 8	+ 280	+ 443	+ 106	- 207	- 605	- 601	- 491	- 317	- 199	- 53	+ 45	- 12	- 130	- 65	- 77	- 77	- 329	- 183	- 119			
5	X	- 122	- 77	- 65	- 158	- 8	- 65	+ 41	+ 414	+ 244	- 292	- 767	- 654	- 349	- 244	- 187	- 45	+ 126	+ 97	- 8	- 102	- 183	- 130	- 118	- 138	- 116			
6		+ 37	+ 187	- 45	- 32	- 57	+ 12	+ 142	+ 406	+ 45	- 304	- 528	- 528	- 378	..	..	..	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	..	..	..	..	- 162	- 187	- 126	- 122	- 49	- 77	- 20	- 57	- 49	- 69	+ 8	+ 386	+ 183	..
8		- 244	+ 467	+ 195	+ 53	- 12	- 207	+ 207	+ 755	+ 548	+ 146	- 694	- 731	- 674	- 455	- 171	+ 49	+ 134	+ 77	+ 57	+ 20	- 53	- 69	- 37	- 142	- 33			
9	X	- 53	- 118	- 61	- 118	- 37	+ 57	+ 244	+ 625	+ 369	+ 20	- 650	- 658	- 430	- 333	- 122	- 118	+ 53	+ 122	+ 65	+ 45	- 32	0	- 65	+ 32	- 48			
10	X	- 37	- 130	- 65	+ 32	0	+ 32	+ 211	+ 544	+ 142	- 304	- 593	- 418	- 398	- 223	- 134	- 24	+ 171	+ 166	+ 142	+ 37	- 41	- 89	- 53	- 179	- 50			
11	X	+ 77	- 41	+ 288	+ 126	- 37	- 166	- 32	+ 199	+ 57	- 158	- 365	- 520	- 585	- 203	- 276	- 85	+ 382	+ 386	0	- 16	+ 130	- 37	0	- 73	- 40			
12		- 49	- 122	- 126	- 386	+ 32	+ 195	+ 118	- 24	- 32	+ 365	+ 45	- 325	- 329	- 207	+ 57	- 85	- 41	+ 61	+ 329	- 57	- 41	+ 114	- 126	- 158	- 33			
13		+ 41	- 508	+ 45	+ 150	+ 41	- 114	+ 235	+ 520	+ 438	+ 57	- 240	- 102	- 211	- 114	- 126	- 317	- 85	- 12	- 49	- 122	- 73	- 81	- 53	- 65	- 31			
14		+ 81	+ 89	- 203	- 53	+ 49	0	+ 199	+ 426	+ 268	0	- 207	- 361	- 118	- 524	- 402	- 483	- 199	+ 199	+ 166	+ 8	+ 45	+ 81	- 37	+ 491	- 24			
15		- 81	- 430	+ 532	- 20	+ 321	+ 57	- 8	- 292	+ 447	- 227	- 223	- 333	- 154	- 215	- 235	- 211	- 223	+ 227	+ 211	+ 179	- 41	- 199	- 81	- 32	- 43			
16		- 106	- 73	- 24	+ 8	+ 32	+ 57	+ 317	+ 183	+ 102	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		- 102	+ 97	+ 37	+ 61	+ 114	- 8	+ 195	+ 528	+ 12	- 345	- 710	- 593	- 414	- 106	+ 32	+ 138	+ 203	+ 451	+ 317	+ 394	+ 426	+ 154	+ 1356	+ 857	+ 16			
18		+ 438	- 512	- 333	- 130	- 183	- 16	+ 447	+ 528	+ 142	- 361	- 321	- 317	- 374	- 195	- 85	- 138	+ 195	0	+ 146	+ 122	+ 349	- 244	- 321	+ 20	- 48			
19		- 227	+ 227	- 901	+ 288	+ 422	- 57	0	+ 577	- 32	+ 402	- 548	- 609	- 345	- 702	+ 503	- 215	+ 390	+ 317	+ 629	+ 418	+ 199	- 223	- 122	- 268	+ 5			
20		+ 45	+ 81	- 292	- 118	- 41	- 264	- 248	- 89	+ 447	+ 146	- 361	- 231	- 508	- 646	- 203	- 353	+ 617	+ 187	+ 974	- 641	- 288	+ 8	- 122	+ 8	- 79			
21		- 102	- 77	+ 32	+ 57	- 146	- 248	- 97	+ 288	- 32	+ 463	- 175	..	..	..	..	..	..	..	..	..	..	- 577	- 81	- 321	..
22		- 211	+ 410	+ 284	+ 223	- 471	+ 162	+ 528	+ 240	+ 207	- 256	- 231	- 475	+ 171	- 548	- 654	- 171	+ 248	+ 369	+ 49	- 85	- 77	- 244	- 85	+ 102	- 21			
23		+ 146	- 81	- 97	- 309	+ 313	+ 166	+ 195	+ 162	+ 114	+ 483	- 106	+ 37	- 24	- 102	- 122	- 85	- 292	+ 528	..		
24		+ 203	- 264	- 146	+ 114	- 106	- 134	+ 386	+ 418	+ 451	+ 97	- 203	- 317	- 231	- 349	- 406	- 422	+ 89	+ 20	- 12	- 73	- 158	- 256	- 8	- 106	- 59			
25	X	- 97	- 32	- 53	- 166	- 268	+ 28	+ 195	- 12	+ 85	+ 32	- 12	- 142	- 227	- 503	- 503	- 321	- 106	+ 81	+ 122	- 12	- 37	- 162	- 215	+ 73	- 94			
26	X	+ 77	- 85	- 361	- 134	+ 102	+ 49	+ 146	+ 219	+ 195	- 49	- 240	- 219	- 97	- 304	- 292	- 252	- 195	- 49	+ 12	- 8	- 41	- 24	- 77	- 41	- 70			
27		- 32	- 65	- 49	+ 81	0	+ 32	+ 122	+ 284	- 118	+ 463	+ 53	- 85	..		
28	X	+ 142	- 369	0	- 122	- 97	+ 16	+ 309	+ 471	- 57	- 438	- 690	- 386	- 20	- 114	+ 195	+ 146	- 118	- 77	- 53	+ 37	+ 126	- 171	- 211	- 134	- 67			
29	X	- 118	- 122	- 110	- 16	- 12	+ 142	+ 219	+ 503	+ 122	- 284	- 467	- 479	- 341	- 203	- 73	- 126	- 97	- 85	- 77	- 126	- 85	- 49	+ 345	+ 102	- 60			
30	X	- 199	- 467	+ 199	+ 130	- 24	+ 130	+ 361	+ 333	- 130	- 508	- 723	- 589	- 252	- 264	- 162	+ 61	+ 288	+ 479	- 37	+ 207	- 118	- 300	- 296	- 171	- 86			
MEANS		- 33	- 72	- 65	- 28	- 16	- 9	+ 198	+ 380	+ 185	- 130	- 417	- 419	- 316	- 318	- 127	- 146	+ 86	+ 127	+ 121	- 5	- 21	- 91	- 153	- 28	- 54			
MEANS		- 51	- 128	- 37	- 58	- 46	+ 22	+ 197	+ 374	+ 113	- 219	- 511	- 467	- 319	- 271	- 175	- 82	+ 55	+ 111	+ 4	0	- 636	- 104	- 102	- 71	- 75			

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

TABLE 158

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 51	+ 18	- 86	-179	- 86	- 45	+ 60	+566	+459	- 72	+316	+101	-134	- 39	+224	- 45	-143	-238	+188	+ 48	- 30	- 72	+ 69	-221	+ 25
2		-173	- 54	- 45	- 39	- 57	+ 30	+ 66	+238	+ 95	-134	-286	-182	-185	-137	+739	-384	- 95	+ 27	+ 98	0	-131	- 86	- 72	- 42	- 34
3		+146	- 60	-164	0	+ 57	- 48	+176	+444	+453	+328	+ 48	+215	- 54	+119	-328	+ 86	+352	+ 77	-215	-280	+ 9	+125	- 33	-396	+ 44
4	X	-402	+161	-107	-137	- 39	- 27	+146	+298	+127	- 51	-241	-238	-158	- 57	- 30	0	0	- 36	- 92	- 27	- 45	+ 33	-146	- 57	- 47
5	X	- 57	+ 33	+ 30	- 45	- 9	+ 6	+ 60	+355	+265	- 27	-286	-274	-122	- 72	- 48	- 9	+ 60	+ 30	+ 30	- 21	-155	- 77	- 45	- 92	- 20
6		+ 89	+182	- 36	+ 27	-113	+ 6	+ 6	+256	+155	+ 36	-116	- 60	- 74	-137	- 45	- 95	- 60	- 77	- 80	- 57	- 74	+ 24	- 45	-104	- 16
7		- 63	- 77	- 15	+173	-179	+ 83	+ 33	+ 74	+ 72	+ 60	+ 36	+ 12	- 48	- 6	- 27	- 60	-146	- 63	-119	- 92	- 86	+ 15	+209	+134	- 3
8		-140	+358	+212	- 86	- 92	-304	+101	+507	+516	+358	-137	-304	-572	-328	-104	0	0	- 27	+ 36	+ 30	- 57	- 36	- 30	-155	-11
9	X	- 60	-113	-125	- 92	- 77	0	+ 30	+334	+268	+179	-206	-352	-188	-155	- 80	-134	- 12	+ 54	+ 63	+ 33	- 18	- 21	-131	0	- 33
10	X	- 36	-137	-122	- 18	- 57	- 74	+ 48	+352	+104	-143	-152	- 86	-238	- 92	- 74	- 12	+143	+134	+125	- 72	- 30	- 83	- 72	-286	- 37
11	X	- 18	- 18	+212	+ 83	- 6	-116	-119	+ 21	+ 3	- 74	-149	-194	-259	+ 42	- 86	- 39	+346	+414	- 89	- 15	+ 72	- 6	- 83	- 92	- 7
12		- 6	-107	-137	-167	-224	+149	+ 9	+173	-107	+170	+215	- 33	-197	+ 74	+370	+ 63	- 86	+137	+313	-146	-116	-131	-277	- 18	- 3
13		+ 15	-361	- 63	+149	0	-104	- 45	+346	+307	+322	+ 9	+104	+ 27	+212	+ 39	-304	- 86	-131	-146	-167	-107	-125	- 66	- 57	- 10
14		+101	-164	- 95	- 18	+ 54	- 33	+ 77	+271	+206	+ 86	+ 89	- 89	+247	+ 74	-316	-495	-104	+134	+134	- 12	- 60	+ 98	+ 24	+390	+ 25
15		-378	-325	+465	+ 98	+152	+101	+ 89	-206	+165	+215	+ 24	-310	+ 63	- 72	-107	+ 36	+ 51	+340	+411	+107	-161	-325	-191	-146	+ 4
16		-152	-140	- 92	- 56	- 83	- 63	+ 42	+116	+119	..	..	..	..	..	..	..	..	..	..	- 9	-176	- 9	- 66	- 45	..
17		-203	+125	+ 48	- 77	+ 77	- 30	+ 30	+328	+140	+250	-340	-209	-101	+250	+343	+256	+165	+182	+471	+685	+396	+ 83	-1088	+983	+115
18		+432	-301	-346	- 74	-209	- 89	+212	+358	+238	+104	+104	+ 77	- 69	-152	- 18	+ 36	+304	- 63	+194	+241	+328	-453	-226	-328	+ 12
19		+ 51	+128	-495	- 27	+358	+ 48	-215	+352	+131	+727	-372	-480	-131	-206	+730	0	+152	+241	+572	+486	- 24	-212	-384	-465	+ 40
20		- 18	+173	-191	-116	- 54	-316	- 77	+140	+244	+238	+322	+387	-387	-238	+134	-301	+402	+334	+539	-417	-361	- 42	- 33	+ 33	+ 16
21		-268	-170	+ 83	+ 92	- 83	-474	-143	+215	+131	+504	+381	..	..	..	..	..	..	..	+492	+ 54	+ 92	-325	- 57	-685	..
22		-110	+134	+298	+143	-268	- 15	+167	+ 77	- 12	-182	+447	+152	+358	-471	-191	-224	-158	+283	+113	-244	+ 15	-578	+107	+355	+ 8
23		+107	- 24	- 27	-134	+304	+ 77	+167	+447	- 95	+ 60	- 48	- 74	+173	+399	-566	-149	-372	- 98	+ 33	-119	-179	- 77	-477	+584	- 4
24		+304	-146	- 83	+ 95	-152	-116	+158	-262	+286	+218	+ 51	- 60	+ 89	- 69	-212	-194	+203	- 27	-149	+ 77	-128	-259	+ 27	- 86	- 18
25	X	- 24	+ 18	- 6	-119	-194	- 27	+ 63	-116	+ 69	+152	+185	+ 63	0	-176	-209	-283	- 63	+ 54	+122	+ 48	- 30	-274	-185	+134	- 33
26	X	+ 92	- 33	-194	-131	+ 48	0	+ 15	+ 60	+ 60	- 27	-119	+ 24	+122	- 15	- 48	- 86	-134	- 83	- 60	- 9	0	+ 27	- 39	- 39	- 24
27		- 30	- 63	- 86	+ 63	+ 27	- 24	+ 56	+152	0	- 30	-131	- 89	-176	+134	- 24	- 15	- 72	- 27	- 57	+ 15	- 48	+519	+152	- 92	+ 6
28	X	+ 48	-215	+ 45	- 21	- 60	+ 27	+167	+405	+119	- 27	-271	-212	- 27	+ 6	+238	- 15	-146	- 92	-116	+ 21	+ 83	- 42	-182	- 92	- 15
29	X	- 89	- 89	- 89	+ 27	- 24	+ 57	+ 66	+390	+197	- 27	- 33	-110	-206	-173	- 66	-152	- 74	- 54	- 6	- 92	- 36	- 74	+316	+134	- 9
30	X	- 72	-372	+113	+104	- 12	+ 30	+212	+352	+203	- 83	-182	-364	-221	-197	-104	+ 54	+268	+659	-119	+253	- 45	-361	-426	0	- 13
MEANS ALL DAYS		- 19	- 47	- 39	- 18	- 30	- 27	+ 63	+240	+167	+ 94	- 44	- 92	- 88	- 63	+ 5	- 88	+ 25	+ 74	+ 78	+ 10	- 36	- 86	-119	- 1	- 1
MEANS 10 DAYS		- 62	- 76	- 24	- 35	- 43	- 12	+ 69	+245	+142	- 13	-145	-174	-130	- 89	- 51	- 68	+ 39	+108	- 14	+ 12	- 20	- 88	- 99	- 39	- 24

* = 10 LEAST DISTURBED DAYS

MAY 1936

TABLE 159

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+ 26	- 78	-130	-162	-188	+ 39	+260	+545	+247	-266	-584	-617	-519	-312	-136	+ 39	+ 65	+ 58	+117	+ 13	-195	-195	- 65	+ 26	- 84
2	X	- 19	-169	-182	- 71	- 19	+ 65	+312	+441	+175	-214	-448	-454	-331	-233	-195	- 78	- 84	0	-104	- 65	- 58	-130	-227	-136	- 93
3		- 71	- 39	- 78	+ 19	- 19	- 19	+253	+383	+260	-136	-467	-545	-519	-389	-253	-221	-247	- 78	+ 84	+ 78	+214	+130	+331	- 52	- 64
4		-156	-136	-117	-169	- 52	+ 52	+539	-266	+136	+ 65	- 71	- 78	-578	-409	+279	-156	+ 65	- 71	-188	-149	- 91	- 58	- 58	-169	- 76
5	X	- 13	- 58	-104	- 13	-143	+136	+292	+324	- 19	-513	-870	-714	-292	-110	+ 52	+ 91	- 13	- 58	- 65	- 6	-123	-123	- 71	- 65	-103
6	X	0	- 65	-143	+ 13	-123	+ 58	+331	+156	+ 58	- 78	-299	-337	-227	-240	-299	-130	- 65	+ 19	+ 13	- 58	- 84	-188	-136	-123	- 81
7	X	-136	-136	- 58	+ 58	+130	- 52	+182	+221	+117	-162	-396	-422	-208	-156	-266	- 65	- 13	- 65	- 13	- 91	-123	-130	-156	- 52	- 83
8	X	+ 32	- 78	-292	+ 65	+ 84	+117	+182	+247	+ 58	-487	-591	-396	-195	-201	- 78	-143	-130	- 65	-104	+ 13	- 78	- 91	+ 78	-104	- 90
9	X	- 78	-123	-123	-104	+ 65	+ 71	+188	+312	+208	-208	-597	-539	-383	-260	-104	- 78	- 32	+ 71	+ 19	- 32	- 32	- 58	- 84	- 91	- 83
10		-117	-208	-260	-123	-344	+441	+266	+324	+188	+ 26	-286	-312	-201	-117	-785	-331	-104	-214	+ 78	+253	-130	- 19	-136	-182	- 96
11		-188	+253	+188	+ 78	+130	+370	+357	+701	- 78	-195	-402	-286	-260	-182	-130	-208	- 19	+123	+ 84	- 78	- 58	+253	+467	+123	- 44
12		-104	-110	- 84	-123	+130	+117	+247	+117	-156	- 97	-201	-182	-337	-227	-467	+266	- 58	+136	- 52	-266	-104	-208	-104	-234	- 88
13		-195	- 78	0	0	- 13	+117	+260	+305	+143	-324	-617	-513	-454	-286	- 32	+ 52	+ 52	+ 39	-123	- 78	- 58	0	- 91	-117	- 84
14		-201	- 65	- 97	+ 71	+130	+253	+506	+785	+286	-292	-688	-461	-655	-389	+ 26	-123	+ 32	+ 71	+247	-253	-156	-318	+ 65	- 97	- 55
15		-123	-260	+143	+ 19	0	+201	+201	+344	+156	-227	-260	-766	-675	-389	- 65	+ 52	- 13	+162	- 39	+182	-234	+ 13	-149	+169	- 65
16		+ 71	+117	-234	- 78	+ 39	-260	+221	+396	+123	+162	-182	-552	-324	-227	-221	+ 71	+117	- 39	- 58	- 58	-182	-195	-195	-519	- 84
17		+467	+286	-201	+ 78	+ 65	+104	+117	+ 26	-195	-331	-630	-649	-337	-201	+ 84	-156	+182	+545	+ 91	-318	-188	-324	-130	-363	- 82
18		+519	+883	-539	-260	+130	+337	+169	+422	+130	-337	-513	-337	-182	-396	-143	+ 91	+130	+324	+136	- 58	-123	-227	+117	-370	- 3

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										93.9 DIRECTION E 0° .5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	+ 12	- 66	-114	-114	-179	- 12	+114	+419	+305	- 18	-173	-293	-419	-173	- 48	- 12	+ 24	+ 54	+ 96	+126	-108	-138	- 48	0	- 32							
2	X	0	-155	-173	- 54	- 72	- 24	+108	+287	+132	0	- 42	-150	-120	- 42	-132	-108	- 66	0	- 48	0	+ 30	-114	-132	-126	- 42							
3		- 66	- 60	-120	0	- 54	- 78	+ 12	+126	+126	- 36	-114	- 54	-120	- 54	- 90	-179	-239	-120	+ 78	- 12	+179	+227	+281	- 48	- 17							
4		-173	-108	- 96	-102	- 90	+ 60	+329	+ 24	+ 18	+167	+191	+622	-425	-299	+598	-114	- 24	- 60	-179	-138	- 54	- 30	- 78	-305	- 11							
5	X	+ 48	0	- 60	0	- 84	- 24	+ 60	+293	+245	-233	-532	-478	-150	- 12	+ 60	+150	+ 12	+ 48	+ 54	+ 54	- 36	- 36	- 48	- 60	- 30							
6	X	+ 48	- 36	-155	0	-150	- 30	+203	+120	+ 66	0	-126	- 36	- 72	- 24	-132	- 54	- 18	+ 36	+ 54	0	0	- 78	- 96	- 60	- 22							
7	X	-120	- 96	-155	+108	+ 78	- 54	+ 96	+227	+108	- 18	-155	-120	- 48	+ 66	- 60	+ 54	+ 48	- 36	+ 24	- 48	- 60	- 96	-114	0	- 15							
8	X	+ 60	- 12	-155	+ 72	+114	+ 48	+ 66	0	- 78	-353	-311	- 72	+ 84	+179	+179	0	- 30	- 54	- 84	+ 60	- 54	- 84	- 72	- 66	- 23							
9	X	- 60	- 84	- 66	- 18	+ 60	+ 48	+ 90	+ 78	+ 60	-120	-293	-215	-239	- 96	+ 66	+ 54	+ 66	+ 96	- 12	0	+ 36	- 24	- 18	- 60	- 27							
10		- 60	-203	-167	- 60	-275	+ 96	- 54	+126	+ 66	+126	+203	+299	+203	+233	-664	-150	- 24	-191	+120	+173	- 78	-114	-233	-132	- 32							
11		-287	+269	+173	-233	+269	+ 54	+ 96	+454	- 54	- 96	+ 36	+ 60	+ 54	+ 72	+ 30	- 54	+ 30	+ 66	- 18	+ 12	-155	+ 84	+365	+233	+ 61							
12		- 42	-120	+144	- 48	+144	+ 54	+ 66	+120	-233	- 54	+120	+144	- 84	- 48	-144	+371	+150	+ 84	- 54	-185	-138	- 54	-120	-233	- 7							
13		- 96	- 30	0	+ 60	- 24	- 30	+ 96	+221	+120	-132	-419	-275	-209	+ 18	+240	+155	+ 78	- 12	-155	- 66	- 48	+ 12	- 84	-114	- 29							
14		- 42	-179	0	+ 48	+114	+215	+263	+694	+478	+ 66	-251	+ 18	-383	+ 12	+126	-132	-167	- 60	+233	- 72	-155	-353	+114	-150	+ 18							
15		- 36	-311	+257	+ 24	+ 48	+ 66	+108	+245	+209	- 54	+102	-299	-305	-108	+ 36	+150	+102	+203	-185	+173	- 90	-126	-239	+269	+ 10							
16		-138	+126	-167	-180	+ 30	-263	+ 96	+263	+197	+305	+323	-185	- 36	-191	-173	+305	+114	+ 72	- 12	- 72	- 60	-126	-167	-484	- 18							
17		+293	+377	-132	+ 96	+ 60	+ 60	+108	0	- 18	- 84	-299	-323	-209	- 78	+144	- 12	+185	+484	+ 66	- 96	-215	-120	-144	-634	- 20							
18		+311	+861	-263	-155	+ 90	+287	+120	+443	+347	- 84	- 96	+ 36	+317	-263	+132	+ 60	- 84	+245	- 54	+ 24	-191	-203	+108	+209	+ 92							
19		+ 24	-353	+167	+132	-114	+227	+215	+598	+377	-144	-179	- 30	0	-413	-233	+347	- 60	+ 96	-108	-185	-311	+150	+275	-329	+ 6							
20		- 54	-389	+239	+239	+ 54	+ 90	+293	+490	+167	-191	+108	-120	-431	-293	+ 90	- 96	+ 60	- 24	- 72	+ 54	-173	+126	+257	-227	+ 8							
21		+ 60	+ 84	- 54	+ 36	- 54	+ 12	+120	+108	+185	+108	0	-233	-203	- 30	-299	- 54	0	- 12	+ 36	+ 96	- 84	- 96	- 30	-114	- 17							
22		- 60	- 66	+ 54	+ 84	0	+102	+155	+173	+ 90	- 12	-179	-251	-269	-233	- 24	+185	+114	+150	- 60	- 60	- 12	-144	+ 36	- 66	- 12							
23	X	- 72	- 90	- 54	- 84	+ 30	-114	0	+108	+179	+ 96	0	- 72	-179	-335	-179	+ 78	0	0	+108	+ 12	+ 12	+ 36	- 24	- 36	- 24							
24	X	- 96	- 72	- 60	- 24	- 60	-138	-114	+ 54	+114	+108	+126	+132	- 12	-108	-173	-179	-179	- 60	- 72	- 78	- 54	- 42	0	- 42	- 43							
25	X	- 66	-114	-108	- 84	- 54	- 96	- 60	+126	+ 96	+ 66	- 78	-173	-126	+191	- 72	- 66	+ 72	+126	- 48	-120	- 90	- 30	- 66	- 96	- 36							
26		- 72	- 48	+191	+245	+245	+ 18	-191	+126	+185	+ 18	+ 12	- 96	+ 48	-132	+215	+114	+ 30	- 18	-132	-179	-120	+120	-114	-114	+ 15							
27		- 12	-293	+ 90	+287	+ 60	- 72	+ 54	+239	+251	+ 60	-311	-413	-478	-293	+132	+365	+ 60	+108	+203	-227	-120	+ 72	+144	- 72	- 7							
28		-173	- 78	- 54	- 66	- 24	- 54	+ 18	+150	+185	+ 66	+ 24	-251	-138	- 54	- 36	0	+ 66	- 90	-150	- 78	- 36	- 78	- 54	- 18	- 38							
29		-155	-144	-502	+652	+215	+425	- 96	- 54	+ 60	+150	+179	0	0	0	+299	+287	- 60	-114	-167	0	+ 36	+114	-191	+ 72	+ 42							
30		-150	- 96	-132	- 96	- 84	-120	+ 12	+209	+245	+ 60	-419	-520	-598	-275	+108	+ 60	-108	+909	+425	+287	- 96	- 54	- 54	0	- 20							
31		- 60	-108	- 48	- 60	+ 48	- 66	+ 48	+233	+239	- 12	-353	-347	-173	+ 48	+ 60	+ 72	+ 96	- 90	-150	0	- 54	-185	-167	- 30	- 44							
MEANS ALL DAYS		- 40	- 51	- 49	+ 23	+ 11	+ 22	+ 78	+216	+144	- 8	- 94	-119	-152	- 88	+ 2	+ 52	+ 8	+ 59	- 8	- 18	- 74	- 45	- 23	- 91	- 10							
MEANS 10 DAYS		- 25	- 72	-110	- 20	- 32	- 40	+ 56	+171	+123	- 47	-158	-148	-128	- 35	- 49	- 8	- 7	+ 21	+ 7	+ 1	- 32	- 61	- 62	- 55	- 30							

* = 10 LEAST DISTURBED DAYS

JUNE 1936

JUNE 1936

TABLE 161
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LENGTH IN KMS 56.8										DIRECTION N 19°.5 E										
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1		+318	+350	+486	+194	-188	-32	+136	+136	+415	-110	-635	-447	-570	-233	-220	-52	-97	-104	-259	-292	-123	+693	+143	-181	-28						
2		-266	-52	-32	+32	+149	+207	+143	+110	+350	+91	-58	-318	-65	-188	-149	-194	-39	+343	-78	-143	-58	+233	-661	-71	-17						
3		-58	-123	-130	-71	-104	+117	+143	+201	+26	-136	-292	-518	-544	-272	-52	-65	-91	-45	-39	-130	-58	-71	-39	0	-98						
4	X	-71	-65	-13	-13	-19	+13	+181	+421	+201	-233	-395	-324	-259	-168	-123	-26	-130	-71	-84	-136	-123	-71	-39	-104	-69						
5	X	-117	-78	+97	-272	+181	+259	+324	+259	+130	-188	-531	-538	-382	-272	-162	-104	-52	+65	-58	-136	-136	-136	-117	-149	-88						
6	X	-58	-149	-123	-52	+13	+58	+350	+220	-97	-350	-531	-389	-233	-123	+71	+58	-39	-78	-104	-143	-130	-130	-13	-65	-85						
7		-194	-104	-311	-78	+201	+143	+207	+298	+188	-350	-713	-855	-518	-194	-52	+156	+136	+266	+201	+32	-194	-143	-168	-188	-93						
8		-13	-52	-91	-58	+52	+207	+382	-32	-19	-143	-156	-810	-557	-428	-389	-233	-1024	-136	-84	-130	+816	+147	-130	-253	-4						
9		+162	+525	+168	-253	-298	-162	+674	-499	-97	-324	-590	-441	-389	-58	-78	0	+292	-104	-104	-272	+292	-188	-78	+143	-70						
10		-194	-104	-143	+84	-253	+201	+168	+713	-13	+123	-467	-538	-518	-447	-389	+143	+454	-19	+330	-324	-91	-149	-52	-123	-67						
11		-104	-104	+13	+71	+26	+58	+259	+266	-181	-266	-467	-337	-311	-136	-194	-233	-65	+188	+78	0	-26	-292	+58	+227	-61						
12		-143	+78	+130	-39	-19	+19	+78	0	-110	-227	-188	-266	-447	-454	-130	+518	+181	-52	-13	-117	+26	+13	-253	-52	-61						
13		-58	-117	-104	-71	0	-19	+285	-32	+162	-233	-551	-557	-311	-447	-181	+441	-58	-97	-104	+71	-52	-123	-104	-104	-98						
14		0	+363	-84	-13	+136	+65	+65	+85	+58	-156	-356	-363	-181	-84	0	+149	+162	+162	-39	+285	-266	-298	-350	+136	-23						
15		+110	-201	-136	+356	0	+181	+330	+480	+52	+97	-395	-687	-421	-207	+84	+97	+91	+227	+97	+117	-201	-156	-356	+39	-17						
16		-156	-84	+123	-71	-123	+259	+318	+78	-13	-58	-266	-382	-551	-337	-130	+227	+71	+71	+181	-84	-194	-188	-19	-266	-66						
17		-91	+71	+39	+13	+58	+162	+266	+272	-13	-415	-706	-745	-447	-220	-52	+136	+201	+136	+143	-136	-71	-136	-65	-168	-74						
18		-13	-13	-78	0	-123	+233	+194	+512	+376	-207	-583	-966	-1095	-292	-538	-343	+555	+726	+415	+978	+1671	+946	-1614	+1296	+127						
19		+842	0	+305	+389	-298	-52	+318	+194	-311	-337	-577	-642	-499	-350	-194	-330	-78	-78	-162	-227	+123	-525	+240	+136	-88						
20		+311	+52	+45	+188	-117	+162	+253	+324	+259	+52	-292	-765	-590	-337	-123	-91	+52	+71	-26	-65	-78	-194	-58	-194	-48						
21	X	-117	-84	-104	-188	+149	+77	+201	+311	+266	0	-570	-778	-577	-363	-91	+78	-19	-78	-71	-65	0	+52	-71	-104	-89						
22	X	-97	-32	-45	-194	-13	+168	+272	+428	+343	-156	-570	-324	-292	-389	+52	-13	-78	-123	+97	-84	-104	-65	-13	-26	-52						
23	X	-65	-71	-52	+19	+65	+71	+162	+52	-13	+58	-104	-207	-402	-454	-330	-168	-71	+52	+181	+117	-32	-71	-13	-78	-56						
24		-58	-311	-130	-65	-13	+26	+97	+188	+311	-65	-402	-454	-356	-330	-188	-285	+65	+253	+279	+65	+188	-136	-207	-162	-70						
25	X	-181	-143	-117	-97	-130	-123	0	+266	+447	+136	-467	-616	-382	-318	-156	0	+58	+78	0	-71	-65	-39	+13	+19	-79						
26		-58	-78	+246	+78	0	-26	+168	+577	+253	0	-512	-732	-486	-156	-143	+58	+253	+570	+214	-117	-188	-181	-71	0	-14						
27	X	-97	-58	-26	0	-52	+58	+65	+58	+117	0	-259	-486	-467	-395	-227	-130	+78	+123	+181	0	-104	-39	-78	+32	-71						
28		-32	-78	-32	0	+13	-39	+104	+201	+194	-117	-447	-771	-583	-324	-194	+117	+207	+227	+104	-39	-58	-19	+13	-52	-67						
29	X	-39	0	0	+65	+32	+32	+84	+201	+65	-330	-706	-771	-253	-188	-13	+65	+58	+201	+181	+52	-136	-123	-65	-71	-69						
30	X	-19	+26	0	+136	+123	+13	+13	+266	+117	-168	-363	-512	-363	-330	-220	-52	+78	+117	+65	-117	-123	-162	-104	-71	-69						
MEANS ALL DAYS		-19	-21	-3	+3	-18	+75	+208	+218	+115	-134	-438	-551	-435	-283	-140	-3	+140	+96	+51	-37	+17	-18	-142	-15	-56						
MEANS 10 DAYS		-86	-65	-38	-60	+35	+63	+165	+248	+158	-123	-450	-494	-361	-300	-120	-29	-12	+29	+39	-58	-95	-78	-50	-62	-73						
* = 10 LEAST DISTURBED DAYS																																

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+227	+215	+347	+251	-114	-203	-54	+30	+425	-78	-263	-221	-251	+72	-227	+144	+54	-66	-251	-144	-66	+371	-114	-144	-2						
2		-96	+30	-24	-126	-144	+48	-36	0	+84	+179	+185	+299	+658	+251	+329	-108	-120	+96	-132	-24	-114	+12	-694	+126	+28						
3		+84	-30	-114	-30	-114	-30	-12	+84	-54	-78	-54	-78	-120	-66	+102	-60	-215	-60	-90	-120	-48	-72	-36	-30	-52						
4	X	-84	-36	-60	-66	-12	-60	+66	+209	+108	-227	-60	-54	-72	0	-60	+72	-155	-60	-54	-48	0	+54	+36	-72	-31						
5	X	-54	-185	+167	-36	+66	+84	+120	+114	+72	-36	-233	-167	-30	-24	-48	-54	-12	0	-30	-66	-54	-84	-72	-126	-29						
6	X	-48	-114	-108	-54	-36	-24	+72	+60	-60	-233	-185	-60	+108	+126	+167	+54	-48	-144	-120	-60	-12	-60	+48	-18	-31						
7		-132	-54	-227	-48	+60	-60	+54	+179	+120	-90	-155	-377	-215	-72	-24	+173	+150	+263	+305	-191	-173	-72	-120	-144	-35						
8		+36	-215	0	-36	0	+60	+227	+54	-120	-60	+24	-179	-233	-209	-132	+138	+777	-269	-114	-114	+825	-867	-120	+299	+63						
9		-401	+903	+54	-150	-293	-538	+526	-239	-383	+179	-287	+90	-90	+269	+60	+203	+305	-132	-66	-311	+257	-317	+185	+144	-1						
10		-155	-120	-227	+66	-114	0	-48	+425	+36	+305	-54	-227	-126	-269	-257	+245	+425	-108	+60	-108	-48	-114	-126	-114	-27						
11		-120	-120	+18	+60	+54	-72	+150	+42	-138	-126	-233	-66	0	+179	+78	-54	+36	+167	0	+72	-60	-221	+54	+78	-9						
12		-114	+209	+108	+24	-36	-60	+30	+60	0	-54	-96	-203	-287	-329	-12	+484	+245	+48	-108	-120	+84	-179	-144	-24	-20						
13		-84	-90	-120	-84	-78	-60	+191	-108	0	-179	-155	-120	+54	-371	-54	+598	-60	-18	-48	+72	-12	-132	-155	-185	-50						
14		+120	+245	+36	+66	+60	+12	-66	-42	+36	+30	-120	-185	-48	0	+66	+144	+287	+221	-173	+227	-231	-341	-299	+108	+7						
15		+191	-347	-12	+347	-54	+48	+197	+484	+191	+150	+60	-419	-233	-36	+30	+96	+66	0	+203	+287	-269	-114	-383	+209	+29						
16		-108	-12	+173	-66	-66	+150	-30	+179	-48	+48	0	+30	-114	-150	-108	+185	+30	-84	+167	-150	-96	-120	+12	-269	-19						
17		-90	+96	+30	-36	+18	+48	+167	+299	+132	-126	-311	-305	-138	-96	+108	+126	+60	+54	+90	-96	-66	-179	+12	-102	-13						
18		+12	+12	-144	-30	-66	-54	-90	+275	+347	+42	-66	-419	-724	+72	-377	-150	+2033	+401	+413	+933	+1585	+1310	+1495	+1411	+218						
19		+867	+460	+311	+66	-227	+48	-84	+144	-329	-359	-347	-263	-54	-30	-72	-245	-203	-173	-84	-173	+72	-694	+359	+221	-33						
20		+227	+66	+18	+84	-84	+12	+96	+78	+245	+72	0	-239	-185	-114	+60	-18	+12	0	-60	-120	-114	-114	-90	-191	-15						
21	X	-60	-72	-72	-150	+12	-114	+60	+245	+287	+78	-287	-478	-341	-287	+114	+251	+72	-30	-114	0	0	+60	+24	-54	-36						
22	X	+54	+30	+12	-185	-24	+30	+114	+185	+203	-90	-353	-173	-60	-30	+191	+155	+12	-173	-78	-48	-54	-66	-36	-12	-21						
23	X	-30	-30	-12	+12	+54	+18	+30	-18	-72	-24	+72	+12	-126	-353	-239	-72	-114	+54	+120	+90	+48	0	+18	-54	-26						
24		-54	-126	-144	-60	-84	-114	-155	-120	+54	-114	-245	-114	-24	+215	+66	-90	+108	+221	+161	-18	+12	-60	-114	-54	-36						
25	X	-60	-84	-66	+12	-90	-173	-90	+66	+233	+126	-233	-287	-191	-48	+60	+114	+78	+54	-48	-90	-215	-60	-12	-12	-42						
26		-48	-96	+90	+114	-12	-78	0	+323	+353	+66	-179	-472	-167	+36	+108	+233	+425	+550	+60	+120	-293	-197	-126	-114	+29						
27	X	-126	-12	0	-12	-54	-126	-126	+42	+126	+72	-114	-269	-227	-132	+132	0	+126	+120	+114	-66	-120	-36	-66	+12	-31						
28		-114	-96	-54	-36	-54	-90	-54	+36	+66	-179	-239	-413	-239	-66	-18	+287	+233	+191	+132	+66	0	0	+48	0	-25						
29	X	0	+48	+36	+114	+120	+108	+90	+167	+72	-66	-173	-239	+108	+90	+179	+173	+72	+167	+72	-12	-84	-18	-36	-60	+39						
30	X	-12	+30	+48	+126	+90	+18	+12	+114	-18	-185	-114	+12	+185	+60	0	+114	+72	+66	0	-96	-90	-126	-120	-84	+4						
MEANS ALL DAYS		-9	+17	+2	+5	-41	-39	+45	+112	+66	-32	-140	-186	-106	-40	+7	+105	+158	+45	+11	-10	+22	-27	-119	+25	-6						
MEANS 10 DAYS		-53	-42	-6	-24	+13	-24	+35	+118	+95	-58	-168	-170	-65	-60	+50	+81	+10	+5	-14	-40	-58	-44	-22	-48	-20						

* = 10 LEAST DISTURBED DAYS

TABLE 163
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
JULY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-52	0	0	+142	+168	+71	+213	+362	+220	-65	-549	-795	-646	-362	-278	-71	+13	-97	-329	-200	-265	+233	+329	+245	-71
2		-478	+168	+1234	+665	+581	+220	-58	+375	+452	+103	-231	-291	-672	-575	-388	+13	+329	+187	-459	-452	-194	+58	-123	-168	+3
3		-207	-39	-136	-71	+39	-90	+71	+129	+58	-78	-226	-420	-323	-207	-84	+90	+129	+78	-26	-65	-116	-58	-116	-90	-73
4		-123	-168	-233	+200	+181	+77	+200	+317	+258	0	-329	-446	-652	-543	-317	+13	+136	+149	+39	-452	-58	+233	+310	+71	-47
5		+136	-226	-194	+90	+200	+103	+213	+245	+129	+71	-413	-530	-588	-446	-317	+65	+362	+510	+252	-32	-317	-168	+13	-39	-37
6		-420	+71	-530	-71	-459	+866	+568	+388	+304	+194	-252	-394	-413	-504	-90	-297	+123	+368	-52	+504	+26	+420	+433	+575	+57
7		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12		+52	+52	-84	0	+58	+65	+265	+388	+39	-58	-575	-465	-749	-297	+155	-32	+362	+317	+90	-39	+65	+162	+278	-187	-6
13		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	X	+116	-71	0	0	+52	+58	+149	+310	+226	-78	-465	-840	-659	-446	-181	-78	+65	+233	0	+433	+452	+200	+103	-484	-38
16		-388	-123	-116	+13	+84	+71	+129	+207	+181	-317	-646	-291	-220	-142	-71	0	+65	+226	+401	+226	-284	-388	-116	-58	-65
17		-32	+52	+78	+90	+188	-265	+200	+401	+39	-336	-789	-717	-478	-413	-484	+78	+484	+426	+58	+155	-90	+58	-13	-142	-60
18	X	+84	+52	-116	+39	0	+71	+226	+162	+116	-258	-478	-620	-452	-265	+90	+194	+342	+168	+187	-187	-181	-181	-129	-265	-58
19	X	-123	-123	-90	-123	-19	+129	+258	+162	+65	-517	-717	-556	-549	-129	+58	+90	+200	+136	+252	-220	-103	-71	+19	-90	-86
20	X	-207	-90	-65	-71	-58	+52	+200	+381	+349	-123	-717	-904	-704	-388	-252	+39	+200	+252	+97	-52	-123	0	+84	+142	-82
21	X	+65	-13	-65	+58	-65	0	+207	+510	+504	+90	-484	-730	-704	-381	-149	+149	+136	+65	+65	-97	0	-194	-136	-136	-54
22	X	-123	-265	-26	+13	+13	+65	+291	+394	+84	-401	-891	-782	-614	-258	-58	+200	+446	+465	+568	+252	+52	-129	-65	-58	-34
23	X	-58	-65	-71	-90	0	+123	+258	+291	+187	+155	-284	-711	-782	-523	-187	+71	+226	+194	+52	-123	-71	-58	-168	-65	-71
24	X	-58	0	-39	+13	0	+65	+187	+116	+13	-194	-568	-917	-646	-317	-129	+129	+200	+362	0	-142	-97	+181	-97	-58	-83
25	X	+19	-71	+13	+13	-78	+116	+323	+375	+342	-97	-530	-614	-769	-510	-78	-136	+71	+258	+581	+355	-32	+32	-194	-181	-33
26	X	-78	-194	-26	0	-65	0	+252	+439	+349	-129	-646	-678	-452	-278	-52	0	+19	-58	-103	-123	-136	-103	-84	-58	-92
27		-252	+116	+58	+71	-123	-19	+103	+265	+149	-581	-640	-510	-517	-78	+129	+116	+116	+207	-65	-52	+84	-194	-123	-136	-78
28		0	-136	-13	0	-116	-26	+245	+381	+149	-323	-633	-646	-271	-207	+19	0	-78	-71	-194	-129	-71	+26	+13	-401	-103
29		-32	+129	+226	+123	+110	-336	+278	+287	-568	+103	-58	-265	-568	-200	+136	+220	+90	+129	+187	+136	+136	-97	+317	-26	-7
30		-97	-116	-452	-97	-129	+71	+297	+336	+220	-317	-769	-646	-510	-194	0	+168	+123	+39	-129	-252	-123	-149	-129	-123	-124
31		-78	-142	-472	+174	+381	+136	+329	+388	+258	-168	-724	-840	-536	-226	0	+284	+226	+168	+672	-420	-58	-194	-265	-394	-63
MEANS ALL DAYS		-97	-50	-47	+49	+38	+68	+208	+299	+169	-120	-511	-609	-561	-329	-105	+54	+183	+196	+89	-41	-63	-16	-21	-88	-54
MEANS 10 DAYS		-36	-84	-48	-15	-22	+68	+235	+314	+224	-155	-578	-735	-633	-350	-94	+66	+190	+208	+170	+10	-24	-32	-67	-125	-63

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										DIRECTION E 0° 5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		- 18	- 30	- 53	+142	+178	- 18	0	+154	+119	- 12	-166	-231	-213	0	+ 12	+ 53	- 36	-202	-374	- 83	-225	-113	+474	+255	- 16																
2		-623	+ 95	+978	+712	+439	+ 30	-142	+202	+557	+587	+291	+142	-285	-237	-231	+ 65	+261	+320	-546	-409	-172	+107	- 59	-125	+ 82																
3		-190	+ 83	- 71	- 12	0	- 36	0	- 30	+107	+ 24	- 71	-184	- 65	+ 18	+113	+113	+ 65	- 47	-113	-107	-113	- 12	-113	- 95	- 31																
4		-154	-172	-190	+107	+ 65	- 65	+ 30	+125	+184	+ 95	-166	-172	-267	-231	+ 12	+113	+ 53	- 12	- 71	-463	+ 18	+190	+267	- 89	- 33																
5		+ 47	+ 53	-380	+302	+160	- 18	+ 12	+ 53	+ 65	+142	+ 12	- 53	-243	-291	-291	+ 47	+213	+468	+237	+136	-332	-125	- 24	-119	+ 3																
6		-285	-326	-498	-130	-267	+771	+ 65	+480	+178	+249	+ 59	-113	+ 36	-130	+291	-468	+178	+172	-107	-101	-534	+160	-119	-136	- 24																
7		- 89	-498	-439	+291	+243	+ 65	- 18	-113	+142	+249	+142	-196	-190	-237	-107	-148	+ 12	+356	-130	- 65	-125	+231	-225	-267	- 46																
8		-113	- 89	-107	0	- 24	0	+125	+ 83	+ 12	+178	-148	-474	-445	-332	- 36	..	..	..	..	..	..	..	..	..	..						
9		..	..	..	..	..	..	..	..	+ 59	-172	-415	- 53	+302	+125	..	+ 47	+451	+593	+178	+172	- 65	-142	+166	+551	..								
10		-166	-208	-219	- 47	+231	+208	+125	+332	+712	- 12	-273	+231	+213	+190	+219	+836	+575	+350	-172	+391	-777	0	- 71	-225	+102																
11		+130	+ 71	-267	+208	+332	+344	+273	+308	- 53	-415	+302	+261	-213	+356	+332	+296	-658	+178	+225	- 24	+136	+ 24	+ 65	+119	+ 97																
12		+249	+225	+101	+243	+302	+190	+267	+468	+ 71	+178	-125	+ 71	-231	+ 71	+332	- 12	+208	+350	+154	+409	+273	+202	+516	0	+188																
13		- 18	- 77	+ 47	+273	+445	+ 59	+362	+593	+623	- 53	+ 53	+125	- 71	+ 83	+184	+249	+172	+213	+184	+184	+ 95	+ 65	+ 59	+ 95	+164																
14		+107	+ 71	+190	+231	+172	+125	+ 83	+237	+302	+ 30	- 65	+172	+468	+291	+332	+125	+148	+166	+225	- 12	+119	+184	0	+ 47	+156																
15	X	+237	+107	+166	+154	+166	+119	+166	+403	+421	+172	-107	-273	-178	-113	+ 59	+ 83	+ 89	+231	- 53	+172	+718	+409	+237	- 53	+139																
16		0	+ 95	+ 71	+107	+ 71	+107	+ 65	+184	+190	+113	- 18	+ 65	-130	0	+ 59	+136	+267	+409	+528	+202	0	-231	+ 65	+113	+103																
17		+107	+ 95	+148	+ 95	+184	-172	+ 53	+302	+172	- 71	-249	0	-136	-178	-291	-208	+314	+581	+196	+510	-136	+ 59	+166	0	+ 64																
18	X	+184	+172	- 65	+ 65	+ 30	+ 47	+166	+344	+125	- 47	0	- 47	+ 65	+ 89	+184	+208	+474	+249	+125	0	0	0	-107	-130	+ 89																
19	X	- 89	+ 59	+ 77	+113	+107	+ 59	+231	+272	+184	- 24	- 24	+ 95	-107	+107	+125	+285	+350	+184	+237	- 53	+ 71	+ 83	+ 12	+119	+103																
20	X	- 53	+ 59	+166	+ 65	+ 71	+ 71	+184	+320	+350	+ 65	- 53	-208	+ 47	+273	+ 12	+243	+362	+356	+184	+ 59	0	+ 53	+ 12	0	+110																
21	X	- 89	+ 24	+ 6	+113	- 18	-113	+ 12	+237	+362	+249	0	- 18	+101	+184	+480	+765	+623	+320	+285	+261	+208	+ 12	+107	+ 83	+175																
22	X	+ 53	- 30	+ 36	+107	+ 95	+ 59	+190	+415	+172	-231	-445	-291	- 89	+178	+231	+415	+528	+362	+190	+ 95	+ 59	+ 71	0	+ 77	+ 94																
23	X	+113	+ 89	+125	+113	+130	+184	+184	+202	+249	+362	+178	-208	-172	+ 71	+184	+362	+468	+463	+125	+ 65	+ 83	+ 71	0	+ 47	+145																
24	X	+ 65	+ 65	+178	+166	+ 71	+113	+ 65	0	+ 47	+113	+119	-326	+ 53	+291	+237	+243	+469	+522	+285	+184	+225	+468	+231	+ 65	+165																
25	X	+ 89	+ 65	+142	+172	+ 59	+184	+213	+296	+308	+296	+119	+ 53	-190	-172	+279	+119	+291	+213	+480	+237	+172	+166	+107	+ 65	+157																
26	X	+ 47	0	+142	+225	+142	+113	+125	+332	+338	+125	-267	-291	- 83	+ 71	+243	+296	+243	+ 59	- 30	0	+ 53	+ 65	+ 65	+107	+ 88																
27		-172	+208	+190	+184	+ 12	+ 12	+125	+225	+261	- 95	- 12	+184	- 12	+332	+534	+468	+463	+463	+285	+249	+237	+107	+154	+ 59	+186																
28		+166	+ 77	+213	+136	- 59	- 59	+148	+563	+581	+178	+125	+ 12	+356	+308	+652	+486	+362	+356	+178	+190	+296	+362	+332	-296	+236																
29		+107	+231	+ 47	+468	+368	+ 59	+184	+522	-706	+658	+735	+664	+ 53	+350	+463	+326	+208	+190	+ 95	+605	+267	-291	+154	+184	+248																
30		+119	+178	-178	+ 36	+ 83	+ 83	+148	+356	+362	+107	-267	-237	-178	0	+184	+308	+237	+166	0	- 53	+ 59	+ 18	+ 53	+ 24	+ 67																
31		+ 71	+ 24	-302	+267	+445	+107	+184	+368	+362	+291	-184	-421	-237	+119	+208	+362	+308	+237	+409	- 83	+ 59	0	-125	-172	+ 96																
MEANS ALL DAYS		- 2	+ 28	+ 12	+169	+147	+ 91	+121	+281	+234	+115	- 12	- 41	- 65	+ 62	+174	+213	+250	+265	+105	+ 86	+ 25	+ 81	+ 77	- 9	+100																
MEANS 10 DAYS		+ 56	+ 61	+ 97	+129	+ 85	+ 84	+154	+282	+256	+108	- 48	-151	- 55	+ 98	+203	+302	+390	+296	+183	+102	+159	+140	+ 66	+ 38	+126																

★ = 10 LEAST DISTURBED DAYS

TABLE 165

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT_NORTHERLY										LENGTH IN KMS										DIRECTION N 17°.8 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1		+200	-39	0	-32	+103	+136	+329	+446	+323	-278	-775	-769	-594	-207	-39	+116	+388	+258	-19	-129	-97	+13	-187	-58	-38			
2		-129	-252	-71	+19	+39	+65	+233	+355	+278	-323	-614	-484	-420	-271	+226	+207	-71	-136	0	-19	-129	+13	-123	-65	-70			
3		-103	-26	+13	-32	+19	+116	+439	+452	-123	-329	-530	-523	-556	-581	0	+155	-174	+142	+265	-129	+71	+116	-97	-265	-70			
4		-187	-78	-90	-162	+168	+97	+265	+459	+226	-646	-956	-698	-452	-220	-123	+187	+200	+265	-58	-103	+71	-103	-103	+52	-83			
5		-103	-84	0	+78	0	+271	+187	+394	+265	-71	-517	-898	-749	-517	-258	+194	+388	+459	+323	-187	+181	+187	+39	-349	-32			
6		-245	-252	-162	-52	-194	+258	+317	+129	0	-317	-575	-420	-187	-310	-134	+125	+113	+132	+107	+88	+63	+69	+132	-75	-58			
7		-75	-119	-57	+82	+126	+364	+641	+760	+509	+63	-100	-119	-57	-50	0	0	+119	+232	+352	+176	+113	+163	+69	+144	+139			
8		+195	+63	+69	+69	+63	+138	+263	+245	+188	+69	-747	-955	-666	..	..	..	..	-251	..	+176	+13	+320	+301	+176	..
9		0	+69	+63	0	0	+314	+352	-546	+383	-214	-565	-515	-458	..	..	..	..	+195	+151	+151	+245	+320	0	+132	..
10		-496	+75	+69	+182	+82	+195	+182	+389	+195	-57	-314	-477	-414	-195	-138	+100	+75	+75	-100	-132	-57	-69	+82	-94	-35			
11	X	+38	+69	-75	+113	+113	+163	+383	+528	+113	-283	-659	-628	-452	-138	-113	+126	+239	+446	+151	0	0	+75	+25	0	+10			
12	X	+19	+113	+163	+113	+69	+88	+257	+628	+427	-320	-471	-578	-465	-339	-75	-63	+119	+320	+176	0	+100	-69	0	+195	+17			
13	X	+276	+251	+50	+50	+82	+257	+383	+427	+126	-371	-641	-603	-402	-201	+113	+19	+151	+301	+82	-13	+107	+301	+88	+88	+34			
14	X	0	+38	+25	+69	+88	+195	+427	+515	+113	-371	-772	-578	-245	-38	+157	+119	+113	+182	+245	+19	+38	+57	+239	+421	+44			
15		-119	-82	+19	+69	+25	+75	+402	+358	+320	-157	-440	-433	-276	-239	+25	0	0	+195	+220	-157	-31	0	-13	-57	-12			
16	X	+13	0	+57	0	+132	+132	+320	+402	+257	-57	-383	-452	-320	-308	-63	+63	+138	+113	+138	+94	+57	-176	-113	-57	-1			
17	X	-57	0	+25	+94	+327	+597	+515	+565	+220	-289	-747	-666	-440	-188	+13	+364	+314	+295	+25	-113	-75	+31	0	-25	+37			
18	X	-13	+25	0	+75	+176	+163	+477	+565	-50	-383	-509	-327	-119	-57	+38	+88	+50	+19	-13	0	+57	+13	-19	0	+11			
19	X	0	0	+13	+50	-31	+69	+383	+641	+584	-69	-528	-571	-452	-251	-119	+13	+75	+126	+163	+126	+195	+57	0	-38	+18			
20		+13	+13	-13	+201	+126	+195	+597	+130	+251	-327	-565	-496	-371	-283	+113	+257	+188	+176	-57	-50	-13	-50	0	-57	+41			
21		-75	+163	+69	-119	+75	+100	+283	+314	+214	-75	-239	-251	-214	-371	-264	+63	+132	+239	+188	+151	+113	+75	+13	-251	+14			
22	X	+257	0	+13	-57	+88	-57	+352	+597	+565	+50	-452	-641	-578	-377	-50	+188	+138	+82	0	-19	+13	0	+50	+50	+9			
23	X	+57	+57	-44	0	0	+132	+339	+540	+264	-63	-308	-377	-245	-69	-63	-13	-126	+63	+13	-57	-19	-13	+57	-19	+4			
24		-50	0	+38	+38	+44	+188	+226	+383	+264	-195	-440	-377	-195	-57	+113	+119	+57	-57	-94	0	-63	-100	-75	0	-10			
25		+19	0	0	+75	+69	+119	+427	+540	-19	-333	-534	-967	-94	-100	0	+132	+251	+283	+113	+251	+138	+63	+63	+69	+24			
26		+63	+19	+69	+132	+132	+201	+471	+615	+239	-289	-433	-440	-358	-126	-82	+132	+69	+69	-19	-94	0	+38	0	-100	+13			
27		-75	+88	+113	+239	+69	+364	-75	+408	+220	-182	-515	-308	-138	+50	+214	+220	+239	+126	-119	-38	+19	-339	+226	+25	+35			
28		-345	+132	+57	+100	+113	+138	+327	+540	+220	-182	-458	-559	-471	-320	-57	+63	+188	+182	+138	-38	-50	+69	0	-13	-9			
29		+113	+69	+63	+126	+126	+182	+383	+502	+245	-132	-490	-515	-440	-245	+144	+126	+314	+119	+188	+264	+364	-195	-245	-69	+42			
30		-75	+220	+132	+126	+100	+188	+490	+917	-57	-352	-440	-691	-565	-94	-63	+132	+251	+301	-126	-69	+38	+126	+31	-57	+19			
		+69	+113	+126	+44	+119	+245	+377	+477	+19	-126	-452	-553	-371	-182	-50	+57	+75	+126	0	+57	-113	-69	0	+38	+1			
MEANS		-35	+18	+21	+56	+82	+81	+356	+516	+218	-223	-512	-531	-367	-217	-18	+113	+138	+177	+79	-4	+38	+10	+5	-20	+3			
ALL DAYS																													
MEANS		+59	+55	+23	+51	+104	+174	+384	+541	+272	-216	-547	-542	-372	-197	-16	+90	+121	+195	+98	+4	+47	+28	+33	+62	+19			
10 DAYS																													

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

AUGUST 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E. 0° 5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+330	+212	+124	+106	+171	+130	+195	+407	+407	+47	-307	-236	-218	0	+106	+230	+472	+183	0	+53	+88	+177	-88	+83	+111					
2		+94	-112	+47	+177	+148	+165	+195	+242	+248	-47	-171	+153	+242	+212	+307	+171	0	-12	+71	+118	-35	+94	-35	+35	+96					
3		-18	+59	+71	+65	+106	+177	+295	+266	-35	-30	-35	-24	-106	-189	+348	+283	+130	+171	+301	-59	-24	+389	+307	+18	+103					
4		+71	+171	+171	+106	+384	+295	+283	+519	+283	-248	+248	-71	-35	+171	+118	+354	+295	+171	-53	-53	+177	0	0	+171	+126					
5		0	+65	+124	+236	+106	+354	+289	+413	+307	+65	+59	+12	-112	-177	-88	+301	+749	+767	+519	-124	+543	+419	+65	-94	+200					
6		+59	+65	+106	+224	+118	+307	+289	+242	+65	+47	0	+35	+301	+195	+130	+106	+77	+83	+94	+100	+112	+59	+94	+59	+124					
7		+53	-53	0	0	-47	+24	+18	+224	+83	-230	-230	-348	-307	-177	-171	-118	-12	0	+142	+124	+83	+189	+65	+171	-22					
8		+153	+77	+59	+112	+77	+118	+212	+165	+189	+153	-206	-330	-106	+171	+283	-53	+271	+295	+177	+83	-266	+496	+319	+142	+108					
9		+53	+124	+94	+106	-59	+289	+212	+354	+378	-53	-319	-118	+53	..	..	..	..	..	+106	+112	+153	+236	-47	-30	..	
10		-820	+159	+65	+266	+266	+212	+88	+142	+59	+165	-65	-71	-106	+283	+413	+832	+171	+897	+773	+53	+130	+47	+130	-18	+170					
11	X	+183	+183	+47	+142	+124	+183	+248	+271	+242	+77	-112	-183	-171	0	+35	+106	+112	+124	+41	+47	+47	+94	+35	-53	+76					
12	X	+12	+88	+118	+118	+47	+59	+183	+295	+366	-71	0	+71	+142	+94	+224	+53	+206	+354	+230	+41	+236	0	+47	+183	+129					
13	X	+124	+266	+183	0	+65	+307	+295	+212	+201	+88	+53	+12	+360	+330	+183	-53	+71	+183	+65	+30	0	-53	+18	+65	+125					
14	X	-59	-18	0	+41	+35	+124	+177	+425	+348	-112	-283	-142	+177	+519	+280	+165	+148	+236	+206	0	+30	+59	+301	+248	+120					
15		+18	-106	+88	+71	0	+30	+177	+124	+206	+130	+24	+47	+171	+165	+236	+130	+224	+507	+673	+289	+354	+466	+401	+24	+185					
16	X	+47	+47	+65	0	+83	+30	+77	+195	+236	+289	+301	+183	+230	+242	+307	+301	+502	+407	+519	+507	+437	+230	+30	+47	+221					
17	X	+171	+71	+71	+124	+130	+88	+136	+301	+348	+65	-35	-171	0	+130	+171	+448	+206	+189	+118	-35	-130	-18	-53	+59	+99					
18	X	+35	+59	+71	+112	+171	+177	+248	+348	+59	0	0	+65	+425	+460	+319	+112	+71	+118	+112	+106	+112	+153	+53	+65	+144					
19	X	+47	+59	+65	+94	+59	+112	+206	+342	+590	+189	-59	0	+148	+301	+224	+24	+53	+88	+65	+59	+118	+148	+53	+47	+126					
20		+71	+106	+106	+171	+136	+177	+307	+732	+242	+53	0	+35	+106	+130	+584	+366	+360	+525	+401	+348	+407	+401	+183	+171	+255					
21		+153	+260	+301	+153	+301	+236	+242	+407	+460	+525	+419	+472	+236	+12	+18	+384	+419	+466	+384	+407	+437	+460	+442	+47	+318					
22	X	+472	+289	+277	+242	+307	+171	+360	+684	+466	+419	+118	-71	-130	+30	+189	+366	+301	+177	+183	+183	+283	+242	+236	+301	+254					
23	X	+289	+283	+230	+248	+212	+236	+283	+431	+283	+230	+183	+88	+183	+413	+277	+319	+330	+366	+301	+289	+289	+313	+372	+348	+283					
24		+301	+360	+230	+236	+266	+413	+336	+313	+354	+289	+360	+360	+472	+596	+643	+620	+549	+507	+602	+602	+348	+271	+354	+354	+406					
25		+419	+442	+301	+354	+354	+307	+407	+620	+307	+118	+148	-118	+419	+655	+266	+478	+673	+779	+395	+301	+94	+30	+53	+24	+326					
26		+77	+41	+94	+112	+130	+165	+189	+295	+266	+65	+183	+378	+673	+301	+65	+242	+71	+88	+130	+12	+171	+153	+53	-94	+161					
27		-118	+171	+224	+248	+112	+330	-59	+236	+266	+71	-30	+65	+142	+230	+248	+236	+283	+177	-18	+59	-24	-254	+354	+142	+129					
28		-295	+230	+130	+130	+118	+71	+130	+407	+360	+183	+30	-148	-142	-18	+30	-83	+35	+106	+124	-12	+71	+177	+124	+59	+76					
29		+130	+153	+130	+183	+177	+212	+330	+236	+189	+47	-47	-59	-71	+12	+183	+118	+295	+124	+413	+431	-30	0	-189	-206	+115					
30		-136	+183	+130	+106	+65	+106	+236	+425	+165	-24	-53	-153	-142	+71	-289	+53	+153	+177	+35	-18	-206	+289	+71	-71	+49					
31		+148	+65	+83	-65	+71	+65	+124	+342	+130	+71	-77	-83	+130	+53	0	-53	-71	+35	0	+124	-35	-18	+59	-12	+45					
MEANS ALL DAYS		+67	+129	+124	+139	+143	+179	+217	+342	+256	+87	-3	-8	+97	+174	+187	+215	+238	+276	+233	+136	+127	+167	+128	+77	+155					
MEANS 10 DAYS		+132	+133	+113	+112	+123	+149	+221	+350	+314	+117	+17	-15	+136	+252	+219	+184	+200	+224	+184	+123	+142	+117	+109	+131	+158					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

TABLE 167

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+ 6	+ 69	+ 76	+ 82	+ 63	+ 183	+ 309	+ 441	+ 145	- 239	- 447	- 466	- 554	- 132	- 76	+ 50	+ 113	+ 183	+ 120	+ 183	+ 113	- 19	+ 69	+ 113	+ 16
2	X	+ 50	+ 57	+ 82	+ 315	+ 176	+ 239	+ 491	+ 699	+ 517	+ 44	- 447	- 567	- 536	- 321	- 69	+ 126	+ 189	+ 195	+ 13	+ 19	+ 19	+ 25	0	0	+ 55
3	X	0	0	+ 25	+ 57	+ 101	+ 239	+ 561	+ 611	+ 315	- 510	- 769	- 806	- 504	- 252	- 32	+ 101	+ 252	+ 132	+ 94	0	+ 50	- 63	+ 220	+ 32	- 6
4		- 57	+ 57	- 151	- 120	+ 69	+ 126	+ 302	+ 504	+ 410	+ 113	- 410	- 580	- 573	- 441	- 63	+ 107	+ 202	+ 252	+ 176	+ 195	+ 151	+ 32	+ 38	- 113	+ 9
5	X	- 189	- 101	0	- 13	0	+ 113	+ 353	+ 447	+ 309	- 63	- 258	- 536	- 630	- 435	- 139	- 94	+ 69	+ 214	+ 158	+ 183	+ 69	+ 38	0	+ 50	- 19
6	X	+ 57	+ 44	+ 13	0	0	+ 50	+ 246	+ 378	+ 309	+ 19	- 372	- 561	- 567	- 472	- 120	+ 120	+ 302	+ 183	+ 13	+ 19	+ 69	+ 57	+ 13	+ 19	- 8
7	X	+ 57	+ 50	0	+ 82	+ 63	+ 69	+ 239	+ 220	+ 63	- 321	- 529	- 435	- 296	- 183	- 57	+ 69	+ 126	+ 176	+ 94	- 50	+ 69	+ 88	+ 132	+ 164	- 5
8		+ 69	+ 126	+ 189	+ 189	- 57	+ 113	+ 252	+ 378	+ 252	- 315	- 624	- 510	- 353	- 239	+ 139	+ 233	+ 176	+ 252	+ 101	- 101	- 101	- 38	- 13	- 13	+ 14
9		+ 50	+ 189	- 19	+ 491	+ 38	- 113	+ 309	+ 265	+ 365	- 183	- 346	- 252	- 214	- 227	+ 69	- 13	0	- 57	+ 19	+ 202	+ 183	+ 252	- 145	- 94	+ 32
10		- 32	+ 50	0	- 164	+ 265	+ 195	+ 699	+ 561	+ 328	- 365	- 573	- 435	- 189	+ 19	- 25	+ 63	0	- 69	- 88	+ 120	- 126	+ 57	+ 410	- 120	+ 24
11		- 63	0	- 189	- 145	+ 372	- 69	+ 252	+ 592	+ 529	- 882	- 491	- 353	+ 19	+ 189	+ 309	+ 227	+ 132	- 101	- 126	- 38	+ 69	- 63	- 69	- 50	+ 2
12		- 76	- 76	+ 19	+ 63	- 32	+ 63	+ 435	+ 447	+ 214	- 214	- 649	- 605	- 397	- 88	+ 252	+ 126	+ 158	+ 126	+ 57	+ 57	+ 82	+ 38	- 189	- 69	- 21
13	X	0	+ 63	+ 57	+ 69	+ 69	+ 151	+ 384	+ 567	+ 384	- 132	- 517	- 567	- 554	- 227	+ 32	+ 63	+ 132	+ 139	+ 50	- 57	+ 19	- 113	- 63	+ 19	- 1
14	X	- 13	- 57	+ 25	+ 88	+ 50	+ 120	+ 284	+ 441	- 19	- 309	- 454	- 561	- 378	- 76	+ 120	+ 132	+ 126	+ 151	0	+ 63	- 63	- 120	0	0	- 19
15		- 57	+ 32	- 151	+ 195	+ 113	+ 321	+ 517	+ 284	+ 63	- 265	- 454	- 611	- 321	- 57	+ 63	+ 151	+ 145	- 76	- 57	+ 25	- 19	- 38	- 57	0	- 11
16	X	+ 50	+ 50	+ 57	+ 69	+ 69	+ 120	+ 372	+ 372	+ 76	- 189	- 328	- 371	- 239	- 82	+ 57	+ 57	- 82	- 88	- 94	- 19	- 82	- 13	- 38	- 69	- 14
17		- 63	- 32	- 19	- 50	0	+ 101	+ 353	+ 435	+ 132	- 202	- 321	- 504	- 498	- 258	- 252	+ 19	+ 38	+ 57	+ 76	+ 94	+ 101	+ 101	+ 107	0	- 24
18		+ 88	+ 315	+ 517	+ 126	- 158	- 101	+ 365	+ 504	+ 258	- 50	- 309	- 454	- 384	- 202	- 69	+ 63	+ 384	+ 63	+ 63	+ 120	+ 19	+ 57	+ 63	0	+ 53
19		+ 13	+ 13	+ 19	+ 63	+ 50	+ 227	+ 252	+ 416	+ 227	- 132	- 302	- 309	- 252	- 195	+ 69	+ 32	+ 94	- 57	+ 63	+ 50	+ 57	+ 63	+ 13	+ 19	+ 21
20		+ 25	0	0	+ 50	+ 25	+ 63	+ 353	+ 529	+ 265	- 139	- 195	- 378	- 523	- 265	- 38	+ 69	+ 101	0	0	0	0	+ 38	- 13	- 25	- 2
21		+ 57	+ 69	+ 69	- 38	+ 63	+ 139	+ 428	+ 491	+ 302	- 63	- 334	- 441	- 372	- 214	- 69	+ 57	+ 76	- 63	- 113	+ 25	+ 32	+ 57	0	+ 69	+ 9
22		0	+ 13	0	+ 158	+ 113	+ 101	+ 416	+ 630	+ 328	- 57	- 321	- 561	- 668	- 340	- 277	- 391	+ 158	+ 151	- 69	+ 220	+ 309	+ 384	+ 454	- 403	+ 14
23		+ 296	0	0	- 334	+ 32	+ 195	+ 277	+ 258	+ 296	+ 302	- 151	- 504	- 378	- 69	+ 50	+ 25	- 63	- 113	- 101	+ 19	- 38	- 32	+ 50	+ 82	+ 4
24		- 164	+ 302	+ 158	+ 13	0	+ 50	+ 258	+ 378	+ 145	- 233	- 510	- 504	- 284	- 69	+ 189	+ 176	+ 69	- 63	- 57	+ 13	- 13	0	+ 38	- 5	
25		+ 13	0	0	+ 25	+ 57	+ 69	+ 258	+ 265	+ 258	- 32	- 277	- 491	- 410	- 126	+ 63	+ 183	- 145	+ 69	- 25	- 44	- 101	+ 139	+ 214	- 265	- 13
26		+ 882	+ 542	- 189	+ 44	0	+ 101	- 107	+ 561	- 435	- 441	- 302	- 529	- 25	+ 372	+ 617	+ 410	+ 454	+ 113	+ 13	+ 63	+ 19	+ 69	+ 57	+ 76	+ 99
27		+ 63	- 120	- 38	+ 76	+ 132	+ 176	+ 466	+ 441	+ 258	- 126	- 353	- 491	- 410	- 132	+ 50	+ 132	+ 139	+ 44	+ 19	+ 63	0	+ 19	0	+ 19	+ 18
28		+ 63	+ 50	+ 101	+ 82	+ 57	+ 126	+ 252	+ 353	+ 195	- 76	- 302	- 384	- 220	- 277	- 19	- 25	- 38	- 63	- 76	+ 101	+ 76	0	+ 101	+ 63	+ 6
29		+ 120	+ 158	+ 19	- 63	0	+ 88	+ 365	+ 151	- 233	- 183	- 195	- 296	- 145	- 126	- 38	+ 189	+ 113	- 19	+ 32	0	- 19	- 13	- 19	0	- 5
30	X	+ 19	+ 32	+ 50	+ 63	+ 113	+ 132	+ 321	+ 252	+ 239	- 38	- 126	- 353	- 441	- 391	- 151	+ 195	+ 101	+ 189	+ 151	+ 176	+ 183	+ 126	0	+ 38	+ 37
MEANS ALL DAYS		+ 42	+ 63	+ 24	+ 49	+ 61	+ 113	+ 342	+ 429	+ 216	- 176	- 389	- 480	- 377	- 177	+ 20	+ 88	+ 117	+ 64	+ 17	+ 57	+ 42	+ 38	+ 47	- 14	+ 9
MEANS 0 DAYS		+ 4	+ 21	+ 38	+ 81	+ 70	+ 142	+ 356	+ 443	+ 234	- 174	- 425	- 522	- 470	- 257	- 44	+ 82	+ 133	+ 147	+ 60	+ 52	+ 45	+ 1	+ 33	+ 37	+ 4

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

SEPTEMBER 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

			COMPONENT EASTWARD										LINE ON LENGTH IN KMS 93.9 DIRECTION E 0° 5 N													
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+ 18	+ 60	+ 18	+ 48	+ 30	+ 65	+ 95	+ 173	+ 119	+ 36	- 60	- 89	- 184	+ 71	- 54	0	- 54	+ 65	+ 77	+ 268	- 54	- 71	- 89	+ 113	+ 25
2	X	+ 71	+ 60	+ 54	+ 232	+ 178	+ 48	+ 184	+ 512	+ 547	+ 363	+ 30	- 173	- 77	+ 18	+ 71	+ 143	+ 65	+ 71	+ 12	+ 60	+ 77	+ 125	+ 125	+ 125	+ 122
3	X	+ 173	+ 125	+ 167	+ 173	+ 214	+ 238	+ 369	+ 536	+ 452	+ 60	- 190	- 291	- 178	- 60	+ 71	+ 60	+ 178	+ 143	+ 208	+ 107	+ 125	- 24	+ 220	+ 167	+ 127
4		0	+ 30	- 83	+ 131	+ 48	+ 60	+ 184	+ 446	+ 470	+ 369	+ 54	- 184	- 131	- 190	+ 77	+ 107	+ 54	+ 167	+ 184	+ 238	+ 178	- 12	+ 125	- 119	+ 92
5	X	- 119	- 48	+ 24	+ 6	0	+ 12	+ 149	+ 321	+ 351	+ 226	+ 113	- 54	- 298	- 125	+ 12	- 119	0	+ 60	+ 244	+ 292	+ 83	- 60	0	+ 48	+ 47
6	X	+ 48	+ 60	+ 60	+ 60	+ 36	+ 12	+ 95	+ 238	+ 238	+ 65	- 155	- 184	- 220	- 178	0	+ 83	+ 184	+ 131	+ 12	- 24	+ 48	+ 30	+ 12	+ 54	+ 29
7	X	+ 36	+ 42	0	+ 60	+ 60	0	+ 77	+ 184	+ 173	- 77	- 292	- 292	- 119	0	+ 71	+ 119	+ 77	+ 95	0	0	- 30	+ 60	+ 95	+ 119	+ 19
8		- 54	- 65	+ 167	+ 161	+ 65	+ 119	+ 184	+ 333	+ 286	+ 65	- 184	- 208	- 125	+ 12	+ 244	+ 184	+ 119	+ 250	+ 95	- 131	0	+ 30	+ 54	0	+ 67
9		- 71	+ 232	- 178	+ 464	+ 30	- 65	+ 143	+ 298	+ 333	- 18	0	+ 107	- 48	- 131	+ 83	- 65	- 60	- 60	+ 18	+ 238	+ 250	+ 292	- 54	- 48	+ 70
10		+ 48	+ 95	+ 77	- 178	+ 298	+ 184	+ 428	+ 654	+ 524	+ 184	- 71	- 107	+ 125	+ 143	+ 24	+ 48	+ 89	+ 77	+ 125	+ 167	+ 12	+ 149	+ 428	+ 54	+ 149
11		0	+ 12	- 54	- 232	+ 363	- 12	+ 238	+ 649	+ 762	- 178	- 149	- 60	+ 149	+ 303	+ 286	+ 184	+ 125	- 60	- 60	+ 119	- 54	+ 292	+ 119	- 18	+ 114
12		+ 24	+ 30	+ 48	+ 149	+ 65	+ 125	+ 357	+ 565	+ 363	+ 184	- 274	- 292	- 173	+ 48	+ 107	- 30	+ 107	+ 184	+ 173	+ 119	+ 125	+ 125	- 113	+ 12	+ 84
13	X	+ 54	+ 71	+ 65	+ 107	+ 107	+ 173	+ 250	+ 530	+ 416	+ 65	- 113	- 113	- 125	- 54	0	- 60	+ 107	+ 178	+ 131	+ 36	+ 107	0	0	+ 107	+ 85
14	X	+ 65	+ 60	- 18	+ 161	+ 77	+ 173	+ 244	+ 422	+ 226	+ 48	- 71	- 190	- 113	+ 89	+ 107	+ 54	+ 65	+ 244	+ 119	+ 107	- 36	0	+ 71	+ 95	+ 83
15		0	+ 77	- 65	+ 95	+ 36	+ 357	+ 464	+ 416	+ 250	+ 60	- 113	- 226	- 60	+ 48	+ 18	+ 178	+ 232	0	- 54	0	+ 18	+ 24	0	+ 48	+ 75
16	X	+ 24	+ 65	+ 60	+ 95	+ 119	+ 113	+ 292	+ 286	+ 190	+ 48	- 60	- 83	- 60	+ 18	+ 60	- 77	- 12	+ 71	+ 60	+ 113	+ 48	+ 107	+ 71	- 54	+ 62
17		- 60	- 12	+ 24	- 48	+ 12	+ 71	+ 232	+ 357	+ 239	+ 71	- 18	- 190	- 250	- 226	- 333	- 119	- 60	0	+ 54	+ 113	+ 131	+ 190	+ 178	0	+ 15
18		+ 119	+ 77	+ 530	+ 143	- 95	- 65	+ 184	+ 345	+ 363	+ 286	+ 131	- 202	- 190	- 149	- 95	- 83	+ 178	+ 12	- 30	+ 24	+ 48	+ 60	+ 95	+ 60	+ 73
19		+ 60	0	+ 48	+ 77	+ 89	+ 65	+ 101	+ 298	+ 190	+ 113	0	- 6	+ 12	- 95	+ 42	- 36	+ 83	- 48	+ 65	+ 131	+ 113	+ 119	+ 125	+ 48	+ 66
20		+ 54	+ 107	+ 71	+ 113	+ 107	+ 113	+ 268	+ 470	+ 315	+ 12	+ 60	- 18	- 173	- 60	0	- 12	0	+ 60	+ 77	+ 24	+ 60	+ 119	+ 30	+ 12	+ 75
21		+ 95	+ 119	+ 107	- 48	+ 101	+ 178	+ 298	+ 375	+ 357	+ 184	0	- 36	- 60	- 54	- 60	0	0	- 12	- 18	+ 24	+ 65	+ 65	- 36	+ 119	+ 73
22		- 18	+ 18	0	+ 208	+ 184	+ 113	+ 262	+ 416	+ 345	+ 202	+ 12	- 71	- 268	- 65	- 208	- 440	+ 119	+ 184	- 12	+ 250	+ 446	+ 494	+ 422	- 327	+ 94
23		+ 309	- 54	0	- 315	- 65	+ 65	- 12	+ 292	+ 363	+ 416	+ 167	0	- 89	0	- 54	- 107	- 65	- 18	- 30	+ 71	- 36	0	+ 60	+ 66	+ 40
24		- 131	+ 190	+ 95	0	- 48	+ 48	+ 184	+ 369	+ 250	+ 48	- 208	- 286	- 131	- 71	0	+ 77	+ 54	- 12	- 119	- 48	- 24	- 54	+ 12	0	+ 8
25		0	- 12	0	0	+ 54	+ 113	+ 178	+ 238	+ 262	+ 119	- 48	- 173	- 178	- 65	+ 48	+ 107	- 12	+ 339	+ 30	- 71	+ 30	+ 387	+ 71	- 202	+ 51
26		+ 684	+ 30	- 113	+ 36	- 167	+ 232	- 107	+ 619	+ 60	+ 60	+ 119	- 292	+ 89	+ 95	+ 345	+ 196	+ 30	+ 71	+ 12	+ 60	- 54	+ 48	+ 60	+ 48	+ 90
27		- 36	- 268	- 173	- 42	+ 113	+ 65	+ 178	+ 286	+ 327	+ 113	- 71	- 190	- 214	- 89	- 48	+ 71	+ 107	+ 77	0	- 12	- 18	- 12	- 18	- 12	+ 6
28		0	- 48	+ 12	- 12	- 48	+ 113	+ 95	+ 351	+ 345	+ 107	- 48	- 60	- 24	- 89	0	- 60	+ 48	+ 95	- 60	+ 238	- 107	- 83	+ 125	+ 24	+ 38
29		0	+ 71	- 208	- 113	- 36	+ 48	+ 232	+ 208	- 65	- 24	+ 36	+ 143	+ 178	- 149	- 83	+ 119	- 12	- 36	- 54	- 65	+ 119	- 60	- 54	- 60	+ 6
30	X	- 60	- 83	- 60	- 60	0	+ 18	+ 71	+ 119	+ 125	0	0	- 107	- 208	- 303	- 149	+ 107	+ 12	+ 30	+ 95	+ 119	+ 155	0	- 125	- 95	- 17
MEANS ALL DAYS		+ 44	+ 35	+ 22	+ 49	+ 64	+ 93	+ 197	+ 377	+ 306	+ 107	- 47	- 131	- 105	- 44	+ 19	+ 21	+ 59	+ 79	+ 45	+ 86	+ 61	+ 78	+ 67	+ 13	+ 62
MEANS 10 DAYS		+ 31	+ 41	+ 37	+ 88	+ 82	+ 85	+ 183	+ 332	+ 284	+ 83	- 80	- 158	- 158	- 52	+ 19	+ 31	+ 62	+ 109	+ 96	+ 108	+ 52	+ 17	+ 38	+ 68	+ 58

= 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-279	+196	+65	-131	-113	-48	+154	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	X	-18	-12	-53	-77	-71	+24	+297	+416	+261	-89	-249	-333	-416	-285	-113	+83	+101	+95	+65	+48	+53	0	-18	-65	-15
3	X	-48	-71	-36	-59	+36	+65	+244	+463	+410	-48	-505	-582	-416	-172	-59	+95	+226	0	+59	+113	+119	+143	+65	-12	+1
4		-107	-202	+18	-36	-113	+65	+410	+742	+457	-143	-469	-642	-612	-143	+53	+535	+356	+65	+125	+12	+184	+208	+226	0	+41
5		-226	-273	-386	+65	+59	+18	+285	+541	+208	+214	-24	-416	-475	-285	-18	+244	+48	+178	-119	-53	+48	+59	+143	+95	-3
6		+137	-214	+529	+48	-65	-59	+214	+356	+606	+261	+113	-368	-356	-65	-184	-12	+83	+53	+220	+232	+261	+65	-83	-48	+72
7		-53	-12	-65	-107	-71	+48	+166	+356	+226	+184	-53	-291	-107	-285	-172	-208	-53	+12	+18	+71	+178	-77	-53	0	+14
8		-267	+71	+190	0	-440	+18	+190	+440	+119	+125	+125	-36	-285	+89	+12	+24	+95	+184	+422	-166	+546	+166	+77	+267	+91
9		+309	-748	+891	-321	-612	-71	+404	+404	-18	-18	-65	-291	-309	+220	0	+36	-24	-71	-131	-71	-65	-77	-65	-59	-31
10		-59	-30	+48	-24	+18	+48	+172	+178	-53	-350	-440	-303	-119	+59	+178	+125	+83	+65	+48	+18	+12	0	-12	0	-14
11	X	-53	+48	+101	0	+59	+71	+143	+148	0	-178	-214	-190	-143	-65	-12	+18	-18	-53	-18	-30	-48	-30	-143	-53	-28
12	X	-24	-48	-18	+53	+65	+184	+297	+291	+65	-95	-327	-261	-166	+12	+65	+36	-12	-53	-18	-36	-48	-53	-53	-53	-8
13	X	-30	-59	-59	+65	+119	+196	+350	+148	-12	-475	-238	-53	+125	+48	+113	-30	+148	+71	+131	+778	-279	-30	-137	-148	+19
14		+119	+267	-18	-36	-18	+53	+178	+107	-190	-321	-178	-261	-148	-53	+166	+172	-53	-53	+12	+36	+166	+255	+119	-291	+1
15		+297	+53	-119	-53	-48	+42	+404	+523	+356	+6	+119	-214	-457	-107	+59	+594	+178	+529	+915	+778	+131	+665	-154	-386	+171
16		-12	-309	-499	-683	+232	-523	-261	+719	+546	+59	-166	-410	-552	-154	-30	-249	-125	-48	+42	+36	+18	+59	-107	+77	-98
17		+71	+107	+89	+143	-24	+178	+285	+345	-89	-172	-238	-267	-297	-95	-12	+12	-18	+24	+83	-30	+36	0	+59	-53	+6
18		-125	+30	0	-36	-172	-18	+107	+374	+30	-53	-226	-285	-315	-148	+107	+30	-12	+83	+535	+12	+65	-83	-71	-53	-9
19		-12	0	-48	-65	-65	+53	+297	+416	+475	-244	-386	-469	-95	+71	+148	+83	0	+59	+59	+59	+48	+119	+48	+65	+26
20	X	-30	+24	+36	+53	+71	+48	+178	+285	-59	-178	-297	-309	-232	-59	-18	-48	-53	-59	0	+53	0	+36	0	-23	-23
21	X	-53	-48	-59	0	+18	+107	+65	+83	-125	-119	-125	-178	-59	+30	0	-107	+48	-107	-53	+59	+249	+53	-30	+53	-12
22	X	+18	-53	-30	+36	+36	+65	+190	+303	+71	-107	-131	-95	-291	-267	+154	+42	+184	+190	+48	+113	+59	+48	+89	+12	+24
23		-59	-65	0	-261	+600	+404	-184	+107	+178	+291	-416	-48	+386	+505	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27		+36	+89	-53	+53	+184	+178	+172	+238	-12	-190	-202	-297	-238	-95	0	+107	0	+48	+59	+83	-36	-89	-30	-53	-2
28	X	+30	-24	-36	+65	+65	+89	+172	+309	+53	-125	-89	-166	-208	-119	-53	+143	+65	+125	+137	+249	+36	-18	+12	-119	+25
29	X	-30	-36	+36	-53	+18	+65	+291	+404	+178	-53	-244	-469	-113	-285	-48	0	+77	+113	+12	+166	-12	-166	+101	+89	+2
30		+232	+772	-53	+915	-113	-208	-36	+386	+392	-238	-18	+59	-125	-53	+48	+119	+178	+48	+53	+36	+78	-53	-113	-125	+91
31																										
MEANS ALL DAYS		+4	-27	+16	-2	-33	+29	+209	+359	+156	-94	-181	-285	-256	-88	+15	+74	+48	+60	+108	+103	+72	+44	-5	-33	+12
MEANS 0 DAYS		-23	-7	-12	0	+38	+87	+204	+283	+102	-162	-283	-309	-209	-62	+14	+54	+44	+12	+34	+62	+29	+16	-16	-24	-5

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

OCTOBER 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-320	-53	-178	-189	-118	-59	-107	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		..	..	..	..	..	..	..	..	+184	+124	-112	-172	-290	-231	-225	-148	-65	-77	-53	-112	-59	-65	-71	-118	..
3	X	-112	-166	-172	-189	-142	-65	+53	+130	+124	-59	-172	-130	-184	-172	-172	-30	-59	-12	-53	-89	-30	-36	-65	-118	-80
4	X	-95	-178	-107	-172	-118	-107	-41	+124	+118	-172	-361	-290	-178	-53	-107	-18	+148	-118	-71	+53	+47	+47	+24	-112	-73
5		-178	-361	-101	-107	-189	-95	+148	+438	+355	+118	-53	-112	-178	-172	+53	+296	+124	+18	+107	-53	+12	+30	+148	-166	+3
6		-290	-314	-414	-142	-95	-47	-65	+172	+237	+255	+184	-12	-178	-178	-172	+59	-207	-71	-414	-237	-112	-130	-53	-101	-97
7		-59	-474	+207	0	-130	-118	-112	+71	+237	+148	-83	-101	-41	+243	-249	-136	+36	-184	+124	+41	+355	-136	-462	-71	-37
8		-231	-47	-172	-178	-178	-53	-65	+136	+77	+47	-12	-18	+154	-349	-178	-225	-136	-89	-124	0	+95	-112	-178	-112	-81
9		-503	0	+118	-95	-533	+130	+89	+249	+53	+130	+118	+379	-89	+65	+41	-207	0	+184	+237	+124	+166	+320	-349	+272	+37
10		+178	-485	+154	-178	-562	-89	+83	+166	+59	-47	+12	-118	-189	+160	-71	-53	-112	-154	-178	-112	-166	-112	-124	-172	-88
11	X	-154	-142	-53	-124	-107	-107	-142	-59	-107	-284	-243	-154	-142	-77	+30	0	+36	+71	-53	-53	-53	-77	-95	-59	-90
12	X	-112	-47	-89	-107	0	0	-12	-47	-124	-118	-59	-65	-118	-130	-83	-53	+53	-53	-136	-89	-118	-83	-207	-101	-79
13	X	-71	-172	-118	-95	-59	+118	+59	+12	-47	-71	-118	-118	-71	-112	-71	-47	-53	-53	-71	-83	-59	-71	-95	-107	-66
14		-112	-166	-172	-47	-30	+77	+237	-12	+59	-343	-112	0	+59	-53	+47	-107	-231	+213	+237	+716	0	-89	-207	-231	-11
15		+18	+95	-118	-207	-118	-59	-71	+30	-107	-178	-18	-65	-59	+112	+195	+89	-272	-148	-36	-18	+89	+12	+107	-71	-33
16		-53	+12	-284	-136	-59	-118	+89	+284	+83	+645	+657	+201	-237	-414	+284	+728	+136	+533	+468	+740	+107	+278	-704	-172	+128
17		-30	-332	-716	-408	-107	-468	-361	+278	+297	+166	+53	-178	-474	-166	-47	-266	-207	-107	-53	-47	-47	+12	-195	+53	-140
18		-53	-77	-130	+71	-213	+53	+53	+65	-124	-107	-118	-142	-237	-107	-71	-95	-65	+18	+18	-95	-118	-36	-112	-112	-72
19		-166	-65	-95	-166	-231	-124	-36	+166	-118	+47	0	-95	-178	-47	+71	-59	-166	+237	+574	+65	-118	-184	-142	-107	-39
20	X	-71	-47	-124	-71	-89	+18	+243	+403	+308	0	-178	-249	-160	-47	+59	+41	-71	-65	-136	-71	-59	+47	-53	-12	-16
21	X	-136	-12	-18	-118	+112	+95	+59	+71	-12	0	-36	-112	-166	-59	-118	-172	-59	-36	-77	0	-53	-24	-53	-59	-41
22	X	-77	-112	-172	-83	-65	-65	-59	-53	-53	+124	+53	+47	+201	+178	+65	-18	+148	-6	-65	+95	+112	+12	0	+12	+9
23		0	-59	-71	-71	+18	0	+136	+225	+95	+18	+107	+219	-36	-160	+207	+195	+124	0	+36	-47	-178	-89	+18	-59	+26
24		-136	-36	-142	-320	+243	+414	+172	+71	+296	+521	+47	0	+184	+326	+296	+332	-148	+12	-18	-65	+59	-30	+148	+95	+32
25		-24	+65	+130	+148	0	-12	+65	+83	+112	+59	+142	+47	+53	+12	-59	0	-65	+41	0	+36	-53	0	0	0	+32
26		+53	0	+65	+112	+18	+112	-53	+59	+47	+71	+112	0	-124	-59	+59	+89	+36	+12	-71	0	-18	0	-12	-12	+21
27		+18	-12	+36	0	+36	+36	+154	+107	+59	+112	0	-83	-65	-53	+12	+30	+59	-77	-12	-18	-36	-53	-65	-36	+6
28	X	-59	+77	-41	-77	+65	+195	+118	+184	+166	-12	0	-65	-172	-71	-36	+18	-24	+36	0	+12	-18	-59	+59	-36	+11
29	X	+36	-107	-95	0	0	+118	+112	+243	+112	-53	-47	0	0	+24	-12	+36	+30	-18	-12	+166	0	+53	0	-101	+20
30		-12	-47	-59	-59	-59	+12	+154	+332	+296	+225	+83	-178	-231	-189	-112	-130	+12	+24	-65	+47	0	-178	+142	+83	+4
31		+59	+385	-628	+776	+36	-59	+255	+349	+290	+101	+237	+255	+53	+12	+12	+12	+36	+59	+59	+47	+12	0	-53	-65	+93
MEANS ALL DAYS		-82	-97	-117	-70	-88	-7	+44	+147	+96	+46	+7	-39	-97	-53	-4	+11	-31	+9	+7	+37	-6	-21	-95	-56	-19
MEANS 10 DAYS		-85	-91	-99	-104	-40	+20	+39	+101	+48	-64	-116	-114	-99	-52	-44	-24	+15	-25	-67	-6	-23	-19	-48	-69	-40

★ = 10 LEAST DISTURBED DAYS

TABLE 171
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1936

NOVEMBER 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LINE		OM		LENGTH IN KMS										DIRECTION N 17°.8 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN									
1	X	- 60	-107	- 30	0	- 36	+ 60	+178	+125	- 12	-244	-226	-184	-214	0	- 65	+ 60	+113	+113	+ 65	0	+ 30	+ 12	- 60	- 71	- 23									
2	X	- 60	- 48	- 65	0	0	+107	+286	+298	+184	+ 36	-190	-363	-393	-280	- 48	- 54	- 12	+137	+125	+363	+375	+428	+184	+303	+ 55									
3		+196	-119	- 95	-422	+268	- 71	+ 60	+214	+321	- 18	+107	-149	-292	+ 95	-428	0	+226	+119	+ 36	+708	+ 30	+ 54	+107	- 18	+ 39									
4		+178	-232	-113	-113	-286	- 12	+232	+333	+173	-125	-309	-470	-422	-268	-125	- 71	+ 65	+345	+333	+303	-321	-173	-113	+ 48	- 48									
5		-107	-202	0	+119	+ 54	+ 60	+202	+470	+363	+ 36	-178	-351	-363	-238	+ 24	-292	-167	- 12	+ 30	+ 60	- 30	- 60	- 71	0	- 27									
6		+ 12	+ 42	-184	+ 60	+167	- 36	+149	+386	+274	+178	-173	-458	-298	+ 18	+ 77	+190	- 60	- 12	+ 18	- 24	- 60	+ 12	+ 24	+131	+ 18									
7	X	- 12	0	+ 65	+131	+119	- 48	- 65	+178	+ 65	-131	-178	- 89	- 60	- 77	+ 36	- 83	-119	+119	+ 30	- 54	+ 54	+ 24	+113	0	- 4									
8		- 48	-113	-131	+ 65	+ 60	+ 48	+268	+768	+357	+ 95	-184	-422	-357	-220	-173	+ 83	+ 60	+422	+321	+571	-125	-416	-190	- 30	+ 30									
9	X	-238	- 83	- 71	- 12	0	+ 12	+ 54	+309	+333	-298	-286	-351	-345	-167	+ 18	0	-125	- 65	- 30	+ 65	+178	-137	- 95	-119	- 61									
10		- 24	+ 71	+ 36	+ 36	- 54	+ 48	+167	+268	+292	-149	-530	-226	-303	- 54	+ 54	- 24	+ 60	+ 65	+125	- 12	+ 83	+ 30	+ 71	-571	- 23									
11		+309	0	+268	+178	- 60	-184	+131	- 71	+178	+214	- 71	-238	+ 54	+ 60	+167	-125	- 71	- 60	+ 65	+226	+416	-262	-250	-107	+ 32									
12	X	-125	-113	-113	- 48	- 48	- 12	+ 71	+ 48	+149	0	0	-173	-173	-309	- 89	- 12	- 54	+ 36	+125	0	- 12	- 36	- 65	- 95	- 44									
13	X	- 65	- 65	- 60	0	+ 30	+ 54	+137	+268	+244	+119	+ 12	-107	-238	-184	-143	- 77	+ 54	+107	+ 65	+ 36	- 65	- 77	-113	- 89	- 7									
14	X	- 89	- 48	- 60	+ 65	+ 60	+ 36	+119	+387	+345	+ 60	-244	-405	-381	- 65	-178	-125	0	+ 36	+167	0	- 12	- 24	0	+ 48	-13									
15		+595	+ 71	-125	+ 54	-238	-178	- 24	-238	+292	+446	+161	- 54	-309	-149	- 30	-196	+351	0	+119	+ 95	+262	-268	-137	+178	+ 28									
16		-107	-125	- 12	+ 60	+ 60	-321	- 12	+464	+536	+149	-125	-101	-357	-351	-107	+ 6	+ 12	0	+ 54	+ 77	0	+ 60	0	+ 12	- 5									
17	X	- 42	-184	- 12	0	+ 54	0	+ 60	+214	+238	+178	- 54	-399	-405	-315	+ 24	- 60	0	+208	+ 54	+184	-107	+ 54	- 54	+ 12	-15									
18		-565	-125	0	- 89	-119	+173	+ 95	+512	0	- 95	+149	-149	+ 12	- 48	..								
19		-184	- 54	+ 30	+ 71	+ 24	- 71	+107	+196	+351	+303	+ 60	- 12	-125	-167	+ 48	0	+ 95	+ 77	+190	+ 65	+178	+125	0	+ 60	+ 57									
20		+ 65	-113	+184	-149	+ 54	-101	- 95	+238	+178	+131	..	..	..	..	..	- 89	- 83	- 18	+ 30	+113	+ 30	- 12	- 12	- 54	..				
21		- 77	- 71	- 48	- 30	- 18	- 24	0	..	..	..	..	..	- 65	-303	-292	-184	- 48	..	..	..	+125	+ 71	- 36	-202	..	
22	X	+ 48	- 48	- 60	- 42	+119	-119	+321	+ 71	+238	+351	+226	- 65	-238	-315	-190	-184	- 60	+ 95	0	+107	+ 60	0	+ 18	+ 65	+ 17									
23		+ 60	+ 60	+ 71	0	+ 36	+131	+184	+ 48	+ 66	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+143	+119	+ 48	+ 48	- 12	+ 18	+ 48	..
25		+ 60	+ 48	+ 30	0	..	+ 18	- 54	..	..	..	..	..	..	..	..	-303	- 89	0	0	0	+ 30	- 71	+ 12	- 65	..	
26		- 95	- 83	+ 18	- 36	+ 30	- 18	+ 18	+167	+518	+ 65	+131	-512	-262	-286	-280	-113	+ 48	+ 54	+ 60	+ 36	+ 12	0	- 65	- 60	- 27									
27		- 24	- 83	- 65	- 71	- 60	- 12	- 65	0	+214	+369	+292	-244	-411	-482	-399	-107	- 18	+ 65	+ 54	- 12	0	- 54	- 48	-107	- 53									
28		- 36	- 60	0	- 54	+ 12	- 54	+ 18	+ 95	+143	+184	+107	-226	-298	-238	- 71	- 12	0	+1017	+125	+327	+1285	+1244	+ 65	+625	+217									
29		-1273	+321	+571	-649	-649	+178	+190	+149	+101	+ 12	- 83	+125	- 65	+155	- 60	- 48	+ 48	+ 60	+ 60	+ 48	+ 18	- 24	- 48	- 65	- 39									
30		- 60	- 60	-125	0	- 71	- 30	+ 36	+184	+553	+381	+321	-143	-345	-357	-238	- 89	- 48	+178	+125	+ 54	+ 83	0	-149	+ 7										
MEANS		- 55	- 55	- 14	- 25	- 19	- 23	+110	+220	+269	+ 92	- 59	-234	-275	-175	- 91	- 56	+ 17	+129	+138	+134	+ 93	+ 20	- 30	0	+ 5									
ALL DAYS																																			
MEANS		- 67	- 78	- 47	+ 2	+ 24	+ 8	+110	+190	+200	+ 44	- 65	-238	-286	-219	-103	- 64	- 22	+ 85	+ 66	+ 69	+ 39	+ 19	- 12	- 5	- 15									
10 DAYS																																			

* = 10 LEAST DISTURBED DAYS

TABLE 172

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1936

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN			
		EASTWARD					LINE ON					93.9					18-19					21-22					22-23						23-24		
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24										
1	X	-66	-173	-12	-36	-66	+36	+95	+66	-24	-72	-83	0	-54	+36	-119	-18	-30	-107	0	0	+12	0	-60	-107	-33									
2	X	-107	-54	-119	-54	-42	+60	+131	-113	+66	-36	-36	-113	-107	-161	0	-54	-131	+137	+226	+232	+244	+346	+298	+238	+35									
3		+185	+66	-191	-244	-59	-95	-119	..	..	..	..	+95	0	+387	-244	-30	+149	-36	-60	+930	-60	-179	+24	+54	..									
4		-215	-203	-185	-191	-274	-113	+48	+298	+250	+72	-54	-18	-66	-119	-112	-83	+18	+477	+226	+298	-370	-197	-60	+72	-21									
5		-60	-66	-203	+36	-12	+12	+36	+292	+292	+191	+119	-54	-179	-89	+48	-310	-215	-66	0	+12	-113	-125	-60	+48	-19									
6		0	-24	-215	-54	+24	-83	-36	+125	+119	+143	+185	-143	-119	+66	+143	+322	-89	-232	-107	-119	-167	0	-30	-36	-13									
7	X	+77	-83	+36	-24	0	-60	-149	-18	+24	-48	+95	+179	+203	+48	+238	-30	-191	0	-107	-179	-107	+12	+119	-42	0									
8		-72	-143	-167	-60	-89	-72	+48	+499	+471	+238	+60	-179	-149	-143	-54	+119	-143	+298	+244	+441	-48	-596	-244	-12	+10									
9	X	-411	-77	-155	-83	-77	-60	-119	+60	+191	-24	-107	-119	-125	-119	-12	-12	-191	-137	-113	+72	+83	-12	-143	-155	-77									
10		-66	-66	-119	-36	-143	-60	0	+179	+268	0	-107	+60	-172	+54	+12	-48	-54	-12	+36	-137	-54	-113	-107	-447	-47									
11		+131	-54	+48	+12	+30	-54	+60	-89	+149	+328	+286	-54	+12	+66	+226	-161	-191	-209	-131	+203	+411	-209	-411	-173	+12									
12	X	-167	-179	-179	-131	-143	-107	-72	-66	-60	+12	+143	-18	-119	-304	-119	-66	-125	-119	+48	-30	0	0	-36	-89	-80									
13	X	-95	-173	-155	-113	-113	-72	-24	+72	+113	+125	+119	+48	-179	-131	-179	-125	+48	+113	-54	0	-173	-155	-119	-131	-56									
14	X	-119	-149	-232	0	-66	-113	-89	+107	+250	+203	+18	-238	-191	-24	-191	-232	-113	-107	+119	-119	-155	-60	0	+42	-61									
15		+256	+262	-185	-113	-250	-238	-66	..	..	..	..	..	..	..	..	-101	-334	+238	-173	-83	-18	+30	-215	-149	+250	..								
16		-119	-119	-173	-24	-83	-221	-60	+203	+298	+215	-36	+125	-119	-328	-48	-232	-232	-125	-83	+12	-66	-24	+12	-66	-54									
17	X	+60	-250	-54	-66	-66	-83	-72	-30	+131	+292	+179	-89	-125	-173	+48	-286	-131	+72	0	-125	-179	+12	-66	0	-42									
18		-471	+387	+48	-83	-304	0	+60	+191	-60	+268	0	+107	-54	+113	0	+89	+179	-131	-77	0	-125	-173	+54	-36	-1									
19		-209	-48	-113	-24	+18	-292	-364	-48	+173	+304	+119	+95	+95	+48	-66	+60	-54	-173	+101	-24	+173	+30	+54	+119	-1									
20		+113	-226	-89	-54	+48	-66	-72	+125	+113	+244	+292	+238	-54	-125	-95	-268	-238	-119	+12	0	-12	-72	-24	0	-14									
21		-36	+12	+36	+95	+215	+238	+113	+173	+185	+274	+393	+328	+179	-12	-232	-238	-72	-107	+54	+143	+155	+95	+66	+143	+92									
22	X	+298	+292	+131	+113	+113	+173	+107	+179	+358	+530	+465	+298	+66	-72	-173	-232	-107	+60	+119	+244	+119	0	+12	+66	+132									
23		+18	-30	-54	-12	-89	+48	+30	+131	+191	+185	+238	+209	+42	-72	-232	-173	-12	+72	+107	+298	+179	+161	-48	0	+49									
24		+12	-48	-18	+12	-36	+48	-60	0	+125	+191	+185	+125	+12	-203	-149	-107	-107	-54	+24	-18	0	0	+18	-48	-4									
25		+54	-60	+18	-113	-107	-48	-167	-113	-48	-30	+48	+113	+60	-95	-191	-310	-191	-89	-72	-36	-12	-101	+24	-54	-63									
26		-107	-113	-72	-24	-72	-54	+12	+60	+232	+203	+268	0	+125	-268	-370	-173	-113	-54	+60	+12	-12	0	-36	-107	-25									
27	X	0	-48	-48	-48	-42	+232	+165	+185	+232	+417	+530	+107	-66	-173	-304	-179	-125	0	+54	+60	+125	+72	+66	+12	+52									
28		+155	+167	+185	+179	+185	+83	+137	0	+173	+149	+250	+72	+48	0	+72	+119	-191	+287	+156	+626	+1824	+305	+399	+1240	+401									
29		-507	+560	+149	-18	-495	+89	+113	+107	-83	0	+66	+229	+232	+358	-77	-113	-48	+30	0	+30	+60	+48	+66	+83	+45									
30		+125	+125	+66	+83	+72	+95	+48	+143	+334	+429	+358	+191	+54	-72	-125	-60	-66	+119	+143	+119	-12	+77	+36	-89	+91									
MEANS ALL DAYS		-62	-30	-59	-26	-58	-16	-2	+97	+159	+172	+143	+61	-27	-68	-74	-100	-104	+29	+71	+72	+64	+11	-8	+17	+11									
MEANS 10 DAYS		-53	-89	-79	-44	-50	+1	-1	+44	+128	+140	+132	+6	-70	-107	-81	-123	-110	-9	+29	+16	-3	+22	+7	-17	-13									

* = 10 LEAST DISTURBED DAYS

TABLE 173

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

DECEMBER 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE ON	LENGTH IN KMS										DIRECTION N 17° 8 E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10		10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		-329	+36	+179	+12	-60	0	-227	+239	+287	+150	+132	-155	-191	-179	-161	-179	-96	+48	+72	+114	+60	-126	+36	0	-14						
2		-173	-185	-42	+54	-72	+12	+66	+287	+329	+305	+48	-293	-484	-287	-102	+60	-96	+48	+108	+239	+215	+191	+108	-54	+12						
3		-12	-323	-144	0	-48	-54	+60	+233	+299	+185	0	-185	-365	-263	-185	-227	0	+54	+60	+108	+179	-209	-12	-30	-37						
4		-155	+72	-179	-72	+167	-365	0	+120	+508	+54	+42	-126	-293	-305	-108	-114	-120	+341	+72	-144	+48	+54	+24	+48	-18						
5		+120	..	..	..	..	..	..	..	..	..	+150	+108	-12	-227	-155	-179	-120	+66	+54	-60	+54	+66	-54	-24	..
6		-36	-108	-60	+18	-173	-60	-12	+120	+448	+299	+197	-72	-173	-359	-323	-126	-173	-72	+173	+84	+66	+30	+66	0	-10						
7	X	0	-12	-54	-18	-60	-66	0	+203	+425	+197	+161	+36	-54	-287	-359	-161	-60	-60	+30	-84	-78	+12	-54	-17							
8	X	-18	+36	-18	-114	-54	-60	-60	+72	+227	+179	+173	-48	-108	-245	-96	-72	-48	0	+54	+36	+24	+30	+18	0	-4						
9	X	0	0	+24	0	+18	0	0	+114	+144	+179	+167	+54	-167	-233	-239	-185	-126	+12	+36	-30	+48	+48	-161	-12	-13						
10	X	-108	-120	-66	0	0	-54	+12	0	+12	+233	+144	-48	-173	-144	-90	0	+18	+72	0	0	-48	-36	-54	-66	-22						
11		-179	+60	+96	-54	+108	+66	0	+60	+12	+36	-36	-126	-144	-96	-54	-144	-90	+108	+126	+12	+48	-30	-120	-54	-16						
12		-18	-36	+48	-245	-48	-179	-239	-54	+215	-167	+118	-45	+28	+107	-84	-157	-67	+151	+135	+73	+269	+286	-107	-107	-5						
13		-11	-67	0	-112	+67	+84	+28	-151	0	+73	+174	-79	-118	-286	+11	+118	-168	+107	+123	+112	+101	+236	+163	+50	+19						
14		-112	-28	+45	-56	+17	0	0	-174	+118	+163	+123	-62	-219	-168	-135	-56	+50	+101	+67	+56	+50	+28	+11	-50	-10						
15	X	-123	+62	-73	0	+11	-157	+56	+28	+168	+151	+62	-67	-180	-337	-224	-151	+45	+118	+157	+118	+90	+56	0	-50	-10						
16	X	-11	-79	-62	0	0	+11	+45	+62	+219	+157	+163	-213	-168	-168	-62	0	-45	+79	+62	+67	+118	+62	+12	-56	+8						
17		-112	-67	-84	-22	-22	0	-50	-56	+34	+95	+174	-28	+34	-118	-62	-67	+79	+62	+84	+123	+45	+45	+39	+45	+3						
18		-67	-157	-34	-56	+50	+50	-269	+252	+359	+269	+219	-62	-236	-280	-314	-191	-50	-56	0	+62	+34	-45	-50	-73	-22						
19	X	-107	-84	-73	0	-50	0	+67	+112	+180	+230	+275	+123	-168	-387	-448	-230	0	+11	+50	+90	+50	+45	+107	-163	-15						
20		-56	-73	0	-135	+135	0	-11	+118	+337	+325	+224	-101	-286	-314	-84	0	+62	+185	+118	+230	+112	+56	+28	+11	+37						
21		-6	-50	-17	-67	-180	-118	+107	+135	-123	+50	+275	+101	-180	-275	-230	-62	-62	0	0	+112	+62	+56	0	-28	-21						
22	X	0	+45	+50	0	-50	+50	+56	+118	+269	+286	+280	-50	-174	-387	-331	-219	+17	-62	+101	+163	+50	-34	-34	+101	+10						
23		+62	+56	-337	+112	+56	-50	-17	+112	+247	+297	+247	+84	-90	-196	-421	-241	+45	+56	+45	+107	+101	+56	-11	-101	+9						
24	X	-101	-62	-50	-22	-45	-11	-67	-62	+118	+280	+219	+73	-11	-118	-174	-163	-67	+11	+56	+45	0	-56	-45	-50	-13						
25		-62	-67	+118	+62	0	-45	-62	0	+292	+269	+112	-45	-90	-236	-135	-118	-56	+62	+56	+56	+101	+101	+11	-67	+11						
26		-67	-123	-56	-45	0	-45	-45	+230	+410	+499	+381	+45	-286	-611	-443	-230	+28	+118	+79	+84	-73	+140	+342	+135	+19						
27		+202	-79	-174	-191	-247	+62	-84	-107	+298	+278	+443	+84	+28	-219	-247	..	..	..	..	..	..	+184	+303	-247	..
28		-275	-208	-381	-488	-241	-342	-903	+286	+1100	+757	+337	+303	+50	-224	-325	-202	+56	+118	+56	+56	0	+6	-191	-168	-34						
29		-230	-118	-101	-118	-286	-112	-157	+224	+230	+471	+342	+56	-62	-297	-449	-286	+50	+107	+62	+62	+11	-56	-56	-73	-33						
30	X	-112	-163	-90	-28	0	-22	-50	+286	+505	+606	+286	-50	-219	-387	-421	-202	+50	+101	+50	0	+11	-11	-90	-90	-2						
31		-140	-163	+28	+62	-28	-17	+45	+325	+337	+449	+174	-50	-477	-673	-471	-112	+28	0	0	+45	+56	+45	+50	+79	-17						
MEANS ALL DAYS		-88	-66	-46	-46	-27	-51	-56	+112	+266	+244	+180	-36	-173	-267	-225	-128	-27	+67	+67	+73	+60	+31	+3	-33	-7						
MEANS 10 DAYS		-58	-38	-41	-18	-23	-31	+6	+93	+227	+250	+193	-19	-142	-269	-244	-138	-22	+28	+51	+52	+26	+3	-24	-44	-8						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1936

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

DECEMBER 1936

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										93.9 DIRECTION E 0°.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN															
1		-209	+12	+173	0	-24	-24	-167	+125	+72	+238	+298	+232	+173	-18	-72	-185	-185	-36	-54	+12	-60	-48	+119	+72	+18															
2		-119	-203	0	+60	0	+83	+113	+268	+286	+370	+322	+125	-113	-54	+48	+60	-66	-66	+60	+179	+405	+226	+125	+95	+92															
3		+48	-131	-179	+107	+66	+12	+95	+119	+292	+298	+185	+244	-60	-24	-72	-250	0	-36	0	+155	+149	-274	+107	-48	+33															
4		-54	+72	0	0	+185	+83	+191	+173	+405	+167	+232	+226	+12	+72	+125	+18	0	+441	-12	-54	+89	+83	+131	+107	+112															
5		+167	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-244	-48	+36	-101	+54	+125	-24	-12	..
6		-12	-36	-54	+30	-60	+36	-60	+119	+417	+238	+358	+167	+143	-155	-232	-119	-179	-238	+185	-48	+12	-54	+60	-36	+20															
7	X	0	-36	-48	-30	-60	-54	-72	+119	+286	+298	+179	+399	+238	-101	-292	-185	-191	-185	-119	+24	-54	-66	0	-48	0															
8	X	+12	+66	+60	-30	0	0	-54	+36	+179	+203	+262	+232	+179	-95	-77	-119	-119	-83	+12	-48	0	+48	+12	0	+28															
9	X	+12	+60	+48	+72	+66	+30	+66	+89	+119	+215	+292	+352	+221	-60	-191	-244	-238	-125	-60	0	+60	+12	-107	+18	+29															
10	X	-48	-54	-30	+24	+54	+12	+12	+48	+72	+238	+298	+119	0	0	0	0	-48	-18	-113	-30	-12	+18	+36	-60	+22															
11		-125	+66	+60	-119	0	+30	0	0	+24	+60	+77	+36	+54	+48	0	-36	0	+66	+179	+149	+60	+48	-54	+48	+28															
12		+18	-48	+89	-215	-90	-226	-364	+36	+95	-179	+79	+170	+170	+125	0	-164	-136	+102	+159	+142	+340	+284	-91	-51	+10															
13		-57	-51	-125	-108	-85	+74	+11	-153	-51	+12	+204	+91	+108	-57	+102	+91	-284	-113	+51	+51	+164	+113	+346	-85	+10															
14		-57	-147	+11	-34	-45	-51	-102	-113	-142	+164	+136	+113	+51	-34	-102	-136	-108	-34	0	+11	0	+62	+57	+57	-18															
15	X	-113	+68	-51	-62	-68	-51	-102	-85	+11	+108	+119	+102	+51	-164	-193	-221	-74	-23	+57	+57	+62	+102	+34	+57	-16															
16	X	+45	0	+51	+51	0	+51	+68	+79	+164	+119	+170	+215	+221	+57	0	-102	-181	-79	-11	+28	+159	+119	+113	+51	+58															
17		+45	+11	-45	+57	-34	-45	-51	-91	-62	+34	+272	+272	+340	+108	-51	-108	+11	+45	+51	+102	-11	+45	+62	+51	+42															
18		+34	-68	+62	+34	+119	+113	-147	+187	+249	+340	+261	+227	+125	-17	-170	-215	-113	-45	-51	+45	-11	0	0	-51	+38															
19	X	-91	-6	-45	-45	-57	-45	+57	+11	+45	+119	+221	+289	+198	-159	-335	-227	-108	-57	-11	+68	+62	+62	+45	-68	-3															
20		-17	-57	0	-170	-28	-68	-108	+62	+221	+221	+227	+102	-68	-85	-79	+11	+45	+91	+11	+164	+108	-17	-51	+11	+22															
21		+11	-51	-57	-119	-284	-57	+91	+79	-249	-68	+397	+279	+147	-45	-125	-57	-147	-68	0	+74	+45	+51	0	-34	-9															
22	X	+62	0	-23	0	-57	+28	+57	+45	+62	+238	+386	+335	+102	-181	-227	-244	-119	-164	-11	+79	-57	-28	-57	+142	+15															
23		+102	+74	-227	+51	+57	-11	-45	-17	+91	+221	+284	+391	+215	+85	-289	-232	-164	-108	+11	+62	+57	+91	+17	-136	+24															
24	X	-113	-74	-62	-57	-17	0	-91	-34	+62	+170	+210	+238	+170	+62	-113	-198	-170	-113	-17	+34	+45	-62	-51	-57	-10															
25		-108	-119	-51	-57	-68	-91	-85	+57	+618	+765	+646	+397	+278	-11	-62	-125	-45	+51	+119	+204	+278	+306	+198	+119	+134															
26		+113	+28	+11	+45	+57	0	0	+164	+340	+448	+556	+425	+62	-454	-386	-238	-68	+51	+79	+159	+102	+284	+363	+397	+106															
27		+459	+62	-108	-215	-68	+108	+113	-57	+147	+578	+680	+629	+346	+11	+11	..	..	..	..	..	..	+612	+386	-79	..									
28		-380	-45	-164	-40	-79	+57	-312	+465	+799	+454	+329	+595	+397	+11	-340	-295	-113	+57	+113	+102	+57	+68	-113	-45	+66															
29		-221	-62	-62	-91	-79	-108	+210	+340	+505	+578	+578	+459	+323	-57	-278	-278	-51	+113	+108	+176	+164	+113	+108	+62	+106															
30	X	+17	-51	-45	0	+68	+51	-28	+119	+284	+403	+448	+335	+221	-79	-363	-181	-11	+62	+23	-68	+23	+62	+51	+57	+58															
31		-17	-51	+62	+136	-17	-11	+45	+227	+278	+391	+329	+301	-79	-420	-397	-255	-57	-28	-34	+34	+28	+51	+62	+68	+27															
MEANS ALL DAYS		-42	-29	-22	-18	-17	-6	-27	+85	+189	+237	+288	+256	+134	-59	-144	-146	-101	-19	+25	+64	+78	+59	+52	+24	+36															
MEANS 10 DAYS		-22	-3	-14	-8	-7	+2	-9	+43	+128	+211	+258	+262	+160	-72	-179	-172	-126	-78	-25	+15	+29	+27	+8	+9	+18															
* = 10 LEAST DISTURBED DAYS																																									

TABLE 175

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NOCTURNAL LINE OM LENGTH IN KMS 58.4 DIRECTION N 17° 8' E

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	- 56	- 90	-118	- 56	- 56	- 79	+ 45	+231	+450	+501	+169	-287	-495	-631	-400	-129	+ 56	+ 34	+ 51	+ 45	+135	0	- 23	- 56	- 32
2		- 11	- 17	-327	- 68	- 45	- 28	+ 56	+276	+524	+625	+352	-152	-158	-647	-811	-304	+ 51	+ 45	+197	+158	+732	-146	- 51	-113	+ 5
3		-101	-135	- 96	-107	-304	- 56	0	+293	+512	+591	+203	-293	-394	-388	-338	-169	-118	+ 34	+158	+118	+282	+124	- 39	- 28	- 10
4		- 84	-276	-107	- 17	-113	-163	- 62	+231	+422	+507	+383	-230	-563	-670	-552	-163	+ 62	+113	+ 56	+ 68	+118	+ 68	+113	-135	- 41
5	X	-101	- 56	- 62	-101	- 79	- 90	0	+253	+563	+664	+456	-129	-238	-552	-619	-417	-158	- 34	+107	+ 28	- 45	+ 68	+ 11	+135	- 21
6	X	- 45	- 68	- 96	- 73	-180	- 56	- 56	+ 56	+276	+400	+276	- 84	-214	-315	-456	-315	- 62	+ 23	+ 62	+101	+ 23	- 11	- 73	+ 68	- 34
7		+107	-146	-113	-141	-158	-203	-231	+101	+287	+799	+495	+287	- 96	+135	+253	+129	+417	+293	+231	+ 28	+ 62	0	+ 62	- 34	+107
8		- 51	- 45	0	+ 34	+ 34	0	0	+118	+394	+574	+462	+ 84	-169	-293	-276	-175	+ 51	+ 56	+ 90	+113	+ 56	+101	- 56	+ 11	+ 46
9		+ 51	+310	+203	+462	+146	- 34	0	-175	+220	+473	+276	- 79	-698	- 62	-129	-428	+ 51	+101	+191	+236	+169	+180	+101	-175	+ 58
10		-107	+158	+ 56	- 45	-146	-175	+214	- 45	+ 45	+591	+349	- 51	-259	-479	-428	-225	+ 11	+270	+118	+287	+231	+214	0	- 23	+ 23
11		+248	-146	-220	-253	-191	-113	-129	+ 62	+524	+709	+535	+107	-135	-276	-383	+ 28	- 56	-107	+ 62	+231	+214	+107	0	- 45	+ 32
12		- 51	-113	+ 73	- 51	-118	-118	-113	+253	+563	+270	+315	-146	-366	-428	-253	- 62	+ 90	+287	+214	+411	- 11	+ 17	- 28	0	+ 26
13		-169	-118	-191	-101	- 51	-191	+ 34	+107	+400	+619	+411	-107	-287	-270	-169	-141	- 45	+ 51	+ 51	+ 34	- 34	0	+ 11	0	- 9
14	X	- 51	-113	0	-175	-146	0	+ 39	+ 34	+332	+479	+180	-107	-276	-400	-338	-101	+146	+ 73	+ 56	+ 45	- 11	- 56	- 62	- 73	- 22
15	X	-113	-113	0	- 56	- 79	- 56	- 56	+169	+586	+676	+332	-462	-895	-597	-175	+ 79	+169	+146	+113	+158	+107	+ 17	0	- 51	- 4
16	X	+ 45	+ 17	- 84	-169	- 90	- 56	0	+287	+563	+569	+248	-276	-439	-501	-349	-158	- 45	0	+ 23	+ 34	+ 11	- 51	- 23	- 73	- 22
17		-113	-107	-113	-163	-107	- 62	- 34	+180	+394	+ 68	+366	-462	-788	-495	-242	+ 28	+ 62	+ 68	+ 56	+ 79	+ 84	- 56	- 17	0	- 57
18		0	- 56	..	..	..	..	..	+270	+563	+484	+ 45	-467	-473	-343	-225	- 56	+ 68	+ 11	0	+ 34	+ 56	+ 11	0	11	..
19	X	- 11	- 34	- 51	-101	- 62	- 45	+ 11	+270	+315	+231	+135	-417	-495	-445	-355	- 62	+191	+ 56	+ 45	0	- 34	- 45	- 45	- 41	- 41
20		- 51	- 62	- 28	0	- 34	+ 28	+ 11	+332	+225	+439	+248	-175	-557	-355	-276	-107	0	+315	0	- 23	+124	+158	- 23	-135	+ 2
21		- 56	- 17	-113	- 51	+113	+ 45	+ 68	-248	+282	+591	-417	-169	-383	-445	-208	- 62	+ 73	+101	+ 62	+ 90	0	+ 28	+ 62	- 34	- 29
22		- 51	- 68	0	+ 23	- 56	0	0	+293	+405	+479	+360	-141	-563	-405	-546	-360	- 96	+ 34	+ 79	- 45	- 79	- 62	- 51	- 73	- 38
23	X	0	- 17	- 56	- 51	- 51	- 28	- 56	+265	+383	+501	+282	-231	-400	-282	-422	-270	-107	- 56	-113	-146	-158	-203	-118	-180	- 63
24		-248	-169	-186	-169	-107	-146	- 11	+113	+220	+394	+298	-107	-490	-563	-405	-242	+ 45	+169	+101	+ 62	+ 56	0	- 45	- 51	- 62
25	X	-101	- 51	- 51	- 17	+ 62	+ 34	- 45	+175	+456	+552	+276	-231	-372	-450	-439	-220	+ 51	+ 56	- 45	- 56	- 56	- 68	- 62	- 28	- 28
26		- 56	- 56	0	0	- 62	- 56	- 79	+124	+456	+676	+552	-259	-844	-844	-501	- 51	+276	+270	+169	+107	0	- 56	- 68	- 28	- 14
27		- 62	- 68	+360	+270	+619	-411	+180	+141	+1008	+197	+214	-236	-462	-304	-197	-141	- 45	+ 68	+ 56	+135	- 23	+113	+135	- 34	+ 63
28		+113	- 51	-101	-186	+ 90	- 90	-113	+ 79	+569	+844	+563	-400	-957	-642	-282	+169	+276	+276	+118	+231	0	+113	-282	- 62	+ 12
29		-146	-180	-220	-146	- 62	-225	+ 56	+259	+462	+726	+417	- 62	-366	-450	-495	-231	- 68	+ 39	-113	- 79	- 28	+113	- 62	- 34	- 37
30		-124	- 84	-158	-248	+163	+ 34	0	+ 51	+169	- 79	+349	- 56	-276	-332	-118	- 34	+ 51	+169	+ 68	+ 51	+107	+ 68	- 11	+ 23	- 9
31		0	- 23	-180	0	- 34	0	- 28	+101	+186	+394	+169	-298	-619	-501	-394	-180	+101	+231	+225	+276	+ 17	+ 34	+ 62	+ 56	- 17
MEANS ALL DAYS		- 46	- 65	- 66	- 59	- 37	- 78	- 10	+146	+406	+502	+308	-172	-445	-430	-343	-144	+ 48	+106	+ 83	+ 90	+ 68	+ 26	- 19	- 42	- 7
MEANS 10 DAYS		- 49	- 58	- 52	- 80	- 74	- 43	- 20	+186	+438	+525	+290	-248	-477	-502	-405	-164	+ 52	+ 57	+ 47	+ 32	- 3	- 40	- 46	- 36	- 28

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1937

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

JANUARY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD					LINE		OW		LENGTH IN KMS 93.9										DIRECTION E 0.5 N					MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1	X	+119	+79	+34	+68	+51	+102	+136	+284	+414	+556	+516	+232	-68	-403	-363	-284	-113	0	+57	+51	+147	+45	+45	0	+71
2		+57	+68	-255	-45	+28	0	+108	+176	+340	+567	+731	+539	+527	-318	-731	-397	0	-170	+164	+176	+578	-113	-159	-113	+73
3		+34	-51	-85	-45	-227	+34	+57	+176	+369	+471	+335	+119	0	-113	-215	-227	-255	-17	+176	+221	+272	+176	-34	+108	+53
4		+28	-113	-62	+62	-34	-113	-57	+108	+272	+459	+635	+369	-215	-448	-465	-227	-68	+51	+34	+102	+119	+159	+187	-170	+26
5	X	0	+51	+17	0	-34	+11	+45	+193	+425	+567	+754	+386	+130	-238	-510	-459	-329	-113	+113	0	+34	+159	+113	+221	+64
6	X	-17	-51	-68	-17	-170	-51	-45	+45	+170	+278	+397	+272	+119	-108	-289	-318	-187	-62	+51	+68	+23	+62	-68	+147	+8
7		+170	-62	-113	+79	+142	+249	+193	+482	+680	+134	+1021	+970	+686	+198	+476	+459	+284	+85	+62	-57	+51	+108	+170	+119	+316
8		+79	+74	+57	+57	+11	-23	-57	0	+181	+346	+408	+408	+102	-198	-153	0	+57	+289	+369	+397	+425	+318	+391	+143	
9		+369	+686	+284	+703	+533	+391	+318	+198	+329	+454	+465	+278	-391	+193	-17	-119	+96	+91	+159	+306	+272	+289	-79	-17	+241
10		+23	+346	+289	+45	-68	-125	+153	-17	+57	+465	+731	+516	+272	-147	-369	-374	-193	+227	0	+386	+125	+340	-11	-91	+108
11		+448	+45	-23	-102	-79	+11	-108	+57	+238	+652	+658	+437	+176	-11	-221	-170	-176	-187	+11	+113	+119	+136	+113	+11	+90
12		+51	-34	+62	+91	-23	-119	-34	+249	+641	+249	+590	+323	-125	-221	-176	-198	-34	+403	+249	+363	+113	+164	+176	+113	+120
13		+329	+113	-91	-45	+45	-85	0	-34	+181	+652	+748	+397	0	-119	-74	-142	-51	+28	+34	+34	+45	+108	+125	-79	+88
14	X	+62	+45	+51	-51	-51	+96	+91	0	+198	+397	+510	+249	-51	-272	-312	-62	+102	+62	+96	+74	+34	+51	+51	+68	+60
15	X	+57	+17	+119	+62	+45	+62	0	+102	+335	+567	+629	+159	-442	-482	-289	-34	+68	+108	+119	+181	+108	+62	+57	+51	+69
16	X	-102	+23	+11	-102	-34	-51	-17	+159	+340	+567	+567	+284	-17	-278	-295	-227	-130	0	+51	+79	+62	+45	+74	0	+42
17		0	-28	-74	-170	-45	0	0	0	+170	+459	+624	+164	-306	-301	-221	-68	-119	+68	+108	+125	+113	-45	+102	+113	+28
18		+85	+57	..	..	..	..	..	+113	+397	+499	+318	+108	-113	-187	-227	-170	-45	+23	+45	+57	+68	+108	+91	+102	..
19	X	+51	+45	+23	-45	+17	+51	+51	+130	+232	+210	+340	+68	-170	-289	-352	-113	+113	+11	+11	0	-11	-45	-11	+12	
20		-11	0	0	0	0	+17	-11	+227	+221	+397	+578	+414	-11	-227	-346	-74	+164	+289	-62	+102	+238	+232	+57	+45	+93
21		+28	+68	-11	+51	+346	+181	+284	+227	+352	+737	+232	+408	+57	-244	+11	-45	+57	-57	+181	+34	+51	+113	+176	+62	+137
22		+68	+57	+91	+108	+68	+108	+102	+232	+346	+493	+590	+289	-113	-91	-352	-346	-255	-125	+62	-17	-51	-57	+68	+45	+55
23	X	+91	+62	+45	+57	+51	+108	+62	+85	+227	+335	+391	+232	-28	-136	-397	-278	-57	+57	0	0	+17	-28	+62	-17	+39
24		-57	+11	-62	-45	+34	-17	+57	+74	+170	+391	+573	+323	-11	-301	-335	-306	-181	-62	-45	0	+17	0	0	+45	+12
25	X	-51	-34	-51	-11	+45	-11	-62	+23	+232	+454	+595	+227	-34	-346	-391	-181	-23	-68	-79	-51	-45	-28	0	-11	+4
26	X	0	0	+28	-28	-136	-74	-147	-17	+170	+567	+822	+272	-374	-601	-516	-272	+141	+204	+113	+79	-45	-34	-57	+34	+5
27		-23	-96	+454	+51	+499	-352	+79	+318	+765	+476	+471	+340	-193	-130	-102	-170	-51	+57	+62	+125	+23	+176	+573	-45	+138
28		+164	+11	-57	-232	-68	-45	-181	-113	+335	+958	+1049	+193	-488	-482	-249	+159	+295	+255	+227	-85	-113	-108	-363	+159	+51
29		-91	-147	-170	-181	-119	-272	-62	-74	+68	+612	+737	+318	-57	-249	-335	-301	-164	0	-113	-45	-11	+125	0	+62	-20
30		-91	-91	-108	-255	+17	-11	-62	+17	+28	+113	+420	+198	-57	-136	-62	-62	-68	+125	+108	+68	+119	+57	+40	+102	+17
31		-11	+57	-130	+11	-11	-34	-108	-125	-17	+312	+442	+153	-227	-289	-335	-204	0	+170	+272	+318	-6	0	+62	+119	+17
MEANS ALL DAYS		+59	+38	+7	+2	+28	+1	+26	+106	+282	+496	+585	+318	-44	-222	-268	-173	-38	+50	+84	+104	+93	+86	+60	+48	+72
MEANS 10 DAYS		+21	+24	+21	-7	-22	+24	+11	+100	+274	+450	+552	+238	-94	-315	-371	-223	-42	+20	+53	+48	+32	+29	+27	+48	+37

* = 10 LEAST DISTURBED DAYS

TABLE 177

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LINE OM										LENGTH IN KMS										58.4 DIRECTION N 17°.8 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN															
1	X	+ 67	-185	- 73	0	- 51	-118	- 45	+169	+388	+674	+444	-140	-506	-618	-450	-225	+ 45	+ 56	- 17	0	+ 56	+ 11	+ 56	- 67	- 22															
2		- 56	+ 84	+112	+ 56	+ 45	- 45	+ 56	+202	+624	+506	+287	-219	-590	-613	-568	-326	-489	- 62	+916	+124	+989	- 11	+1383	+584	+125															
3		+410	+399	+185	-320	-275	-169	- 11	+230	+169	+674	+674	+ 56	-540	-247	-332	+107	+ 73	-174	-174	-124	- 51	- 67	+ 17	0	+ 21															
4		-124	+ 34	+191	-230	-275	+214	+253	+225	+433	+253	+ 12	0	-804	-568	-579	- 90	+ 56	+174	+337	+ 67	+174	+169	+393	-292	+ 3															
5		-422	- 51	- 45	- 90	- 67	-101	+ 17	+354	+523	+275	+124	-225	-371	-169	-652	-253	+163	+ 45	+ 90	- 73	- 17	+326	-230	-124	- 41															
6		-163	- 45	+ 67	-500	+495	+202	+101	+107	+208	+253	+135	- 45	-230	-337	-422	-270	-112	+ 22	- 73	- 90	+ 11	- 56	0	-140	- 37															
7	X	0	-112	+ 34	- 34	-146	-112	+ 39	+270	+393	+101	+ 90	-157	-230	-157	-112	-185	-112	+ 62	- 56	- 62	0	- 90	-107	- 84	- 32															
8		- 56	- 51	+ 22	0	0	- 62	+ 73	+180	+230	+135	-112	-225	-219	-163	-242	-163	-163	+281	- 34	+101	+ 17	+ 73	- 56	-326	- 32															
9		+ 84	- 22	-107	-191	- 67	+225	+ 90	-365	+247	- 56	+230	- 34	+270	+337	+157	-118	-180	+107	+169	+ 67	+107	- 56	+202	-169	+ 39															
10		-118	-135	- 51	-169	+ 22	+169	-388	-433	+101	+ 34	- 28	- 56	- 62	-163	- 51	+242	+ 90	+275	+ 79	+157	+174	-107	0	-422	- 35															
11	X	+112	- 67	+ 34	- 11	- 67	-101	+ 51	+169	+281	+ 11	-163	-247	-214	-135	- 79	- 34	+ 17	+ 62	+ 90	0	0	- 11	- 17	- 56	- 16															
12	X	+ 17	-118	+ 62	+ 11	-107	- 28	+101	+354	+337	- 51	-169	-287	-275	- 90	+174	+135	- 45	+ 51	+107	+157	+101	+ 62	- 62	- 67	+ 15															
13		-169	- 34	+185	+236	-146	-478	+393	+433	+191	+ 67	- 28	- 62	-247	-365	-107	+101	+225	+275	+ 79	+ 62	+118	+ 51	+112	-157	+ 31															
14	X	- 28	-157	- 56	+ 11	+ 51	+ 56	+157	+292	+275	+ 51	- 84	-382	-410	-174	+ 28	- 62	+270	+ 11	- 17	+ 45	+118	+ 56	+ 45	+174	+ 11															
15		+ 67	+107	-101	- 90	+112	- 51	- 28	+281	+ 62	-506	-342	-444	-180	-163	+ 56	+169	+202	+174	+242	+ 56	0	+107	+ 56	+ 73	- 6															
16		+ 84	-107	+107	-326	+107	+112	+ 56	+146	+326	+253	+ 90	- 34	-163	-337	-393	-264	-208	- 62	+ 56	+ 73	+157	- 62	+ 17	+ 17	- 15															
17	X	- 11	-118	-107	+118	+ 90	- 17	-191	- 45	+ 28	+360	-332	-225	-247	+ 56	+ 62	+174	+124	- 62	+163	+180	0	+ 62	+101	- 51	+ 5															
18		0	- 56	- 51	0	- 96	-112	+169	+326	+169	+ 17	- 84	-247	-405	-506	+242	-230	+101	+253	- 34	+ 96	0	+174	+ 56	+ 96	- 5															
19		+416	+540	-191	-410	-208	+438	-101	+259	+450	-483	-568	-191	- 90	+225	+197	+ 39	- 39	- 90	-107	- 79	+ 62	+ 22	+ 22	+174	+ 12															
20		- 34	-169	- 67	-152	- 62	- 90	+ 62	+140	-253	- 62	-101	-163	-180	+ 62	- 79	- 84	+ 22	- 17	- 62	- 11	-219	+ 51	+197	+ 90	- 49															
21		- 11	+ 22	- 67	- 45	+ 39	0	+ 73	+270	- 45	- 34	-152	- 79	+ 62	+ 90	-112	+ 56	- 51	-124	+ 90	+157	+ 62	+ 17	- 51	+ 51	+ 9															
22		+163	+253	+ 34	-247	-157	- 51	+ 51	- 62	+ 51	+197	-247	-242	-219	+ 62	+326	+270	+163	+ 62	+ 45	+ 62	-101	- 79	- 67	- 56	+ 9															
23		- 34	- 67	- 73	- 34	- 11	- 11	+169	+281	+197	- 90	-275	-343	-242	- 56	-107	0	+ 73	+ 45	+118	0	+ 45	+112	0	- 84	- 16															
24		-118	-180	+197	+112	- 62	+ 34	+118	+303	+ 62	- 56	-292	-399	-393	-219	+ 34	+107	+157	+ 56	+ 67	+169	+174	- 51	- 67	- 90	- 14															
25		+ 67	-118	- 51	0	- 56	0	+225	+337	+169	+ 62	-253	-500	-478	-146	-107	+ 62	+118	+112	+ 34	+ 62	+ 45	+ 45	+ 62	-180	- 20															
26	X	+315	+ 45	+107	- 51	+ 28	- 17	+292	+315	+253	- 67	-214	-438	-393	-287	-118	+ 45	+135	+ 90	+ 51	+197	+ 51	+ 22	- 11	- 62	+ 12															
27	X	- 56	- 62	+ 34	+101	- 67	+ 62	- 62	+185	+174	+ 73	- 22	-230	-219	-275	-219	+ 45	+ 51	+ 56	+146	0	- 96	- 51	- 62	- 67	- 23															
28	X	- 34	- 73	+197	+ 11	- 34	+ 90	+230	+259	+214	+ 45	- 67	-399	-427	-343	- 73	+ 45	+ 90	+332	+230	+ 84	- 11	- 45	+ 17	0	+ 14															
MEANS ALL DAYS		- 13	- 16	+ 19	- 80	- 34	+ 1	+ 70	+185	+233	+ 94	- 50	-213	-286	-184	-126	- 25	+ 28	+ 72	+ 91	+ 53	+ 70	+ 24	+ 72	- 44	- 2															
MEANS 10 DAYS		+ 35	- 91	+ 16	+ 12	- 31	- 20	+ 74	+225	+259	+101	- 79	-285	-316	-208	- 89	- 6	+ 65	+ 70	+ 82	+ 60	+ 26	+ 13	- 4	- 36	- 5															

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+ 86	0	-143	- 29	- 57	- 69	-166	0	+229	+629	+692	+343	+ 92	-372	-492	-400	-177	- 46	- 40	- 11	+ 46	+ 34	+114	- 86	+ 7
2		+ 11	+103	+166	+103	0	0	+ 11	+ 33	+357	+543	+595	+326	-109	-286	-446	-406	-641	+126	+1504	+618	+629	+ 92	+1556	+795	+237
3		-109	+320	+257	-109	-343	-143	+ 57	+ 29	- 34	+378	+195	+686	-183	-292	-194	+172	+103	-206	-172	-126	- 34	- 34	+126	- 51	+ 54
4		+ 57	+109	+172	-143	-189	+137	+ 80	+ 34	+343	+406	+423	+692	-200	-275	-606	-263	- 63	+229	+429	+223	- 57	+235	+ 69	- 57	+ 74
5		-252	- 51	- 11	-109	-126	-126	- 57	+ 69	+252	+332	+286	+206	+263	+452	-578	-366	-126	- 51	+ 46	-149	+120	+143	-103	- 40	+ 1
6		- 92	- 17	+ 57	-326	+280	+143	+160	- 23	- 51	+263	+297	+355	+235	- 17	-383	-229	- 63	- 69	+ 23	0	+ 23	- 74	- 51	+ 63	+ 21
7	X	+ 29	- 40	0	0	- 69	- 51	- 86	+ 57	+246	+177	+280	+177	+ 57	0	- 29	-223	+ 57	+343	+280	+389	+292	+166	+ 57	+137	+ 94
8		+114	-172	+ 63	+ 57	- 17	+ 34	+ 57	+109	+172	+235	+126	+ 57	+ 46	- 51	-143	-137	- 11	+343	-109	+ 46	+ 69	+189	0	- 51	+ 43
9		+177	+ 46	- 63	-166	-114	+332	+126	- 63	+114	+ 80	+583	+709	+601	+709	+217	- 74	-297	+ 34	+154	+ 23	+206	- 57	+429	-343	+123
10		+ 51	- 63	+114	-166	-149	+ 80	-109	-269	-183	+ 51	+172	+120	+257	- 23	+120	+309	+ 97	+280	0	+183	+194	- 57	+ 80	-275	+ 34
11	X	+120	- 80	- 17	- 46	- 63	- 34	- 86	+177	+ 80	- 57	0	- 86	+ 63	+ 51	- 74	- 51	+ 46	+137	+ 74	- 46	+ 51	+ 29	+ 51	+ 17	+ 11
12	X	+ 34	- 86	+120	+ 69	- 57	+ 63	+103	+320	+618	+183	+114	+ 29	- 34	0	+206	+ 29	-149	- 23	+ 34	+ 92	+ 29	+ 63	- 51	- 63	+ 69
13		-229	-229	+183	+ 74	- 40	-555	+183	+309	+160	0	+229	+200	+ 57	-172	+ 92	+200	+229	+166	+ 57	-126	+ 46	+ 46	+ 86	-166	+ 30
14	X	- 11	-126	- 69	- 34	- 23	- 11	+ 63	+ 74	+160	+183	+343	+ 63	- 74	+114	+ 29	- 34	+ 57	-177	-183	+ 34	+103	+ 57	- 17	+189	+ 30
15		+120	+ 80	-160	-103	0	+ 34	- 86	+ 11	0	-280	-160	-137	+ 74	- 57	+126	+240	+217	+229	+280	-126	- 57	+ 92	+126	+229	+ 29
16		+349	+389	+400	+137	+229	+343	+543	+309	+458	+389	+303	+412	+412	+ 63	- 46	-223	-269	- 51	+ 86	+183	+166	0	+ 57	+114	+198
17	X	+103	+114	0	+217	+395	+177	+114	+ 69	+ 46	+343	+126	+ 69	+160	+292	+275	+355	+120	+ 57	+229	+217	- 69	+ 63	+143	+ 46	+153
18		+109	+ 63	+ 57	+ 46	+ 80	+ 57	+183	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19		..	..	..	..	..	..	..	..	+526	+378	-458	-399	+ 17	+395	+343	+177	- 51	- 63	- 34	+ 34	+ 63	0	+ 23	+223	..
20		+ 29	- 57	+ 29	+ 63	+ 34	- 11	+ 92	-160	+ 80	- 11	+137	0	+ 80	+183	- 63	-114	+ 51	+ 40	-109	- 17	-200	+ 51	+326	+143	+ 25
21		+103	+120	- 34	- 46	+ 57	+ 40	+120	+309	- 11	- 57	-114	+ 92	+292	+166	- 80	+103	0	-114	0	+172	+ 80	+109	- 17	+ 80	+ 57
22		+ 11	+200	+ 51	-194	-280	+137	+137	- 74	- 11	- 11	+103	- 80	- 92	+ 69	+263	+183	..	..	..	..	..	+ 11	+ 34	..	
23	X	0	- 63	- 92	- 63	- 51	- 86	+114	+217	+172	- 17	-114	-126	- 86	- 29	-166	- 57	+ 29	+120	+172	+ 17	- 17	+223	+ 69	-126	+ 2
24		-172	-177	0	+ 63	- 97	0	+ 51	+ 74	- 57	- 34	- 51	-149	-166	- 86	+ 46	+ 63	+143	+160	+160	+120	+343	+ 63	- 46	- 69	+ 8
25		+132	-109	- 63	- 69	-275	-126	+160	+332	+292	+229	- 34	-355	-332	- 69	-137	0	+ 57	+177	+ 57	+ 51	+ 51	+ 69	+143	-114	+ 3
26	X	+257	- 51	+ 51	- 23	- 69	-114	+235	+275	+332	+166	+ 51	-166	-240	-153	-137	- 51	+103	+143	+103	+229	+160	+120	+ 23	- 51	+ 48
27	X	- 46	- 34	- 29	+ 23	- 74	+ 92	0	+137	+143	+132	+ 46	- 86	+ 57	- 86	-172	- 57	0	+ 20	+246	+ 46	-166	- 63	- 29	- 51	+ 6
28	X	+ 29	- 57	+172	+ 24	- 51	+109	+280	+114	+ 46	+120	+ 46	- 51	-120	-166	+ 46	+ 69	+ 34	+355	+103	- 11	-132	-109	- 51	- 17	+ 33
MEANS ALL DAYS		+ 36	- 5	+ 44	- 24	- 35	+ 10	+ 79	+103	+158	+175	+223	+119	+ 48	- 5	-104	- 46	- 18	+ 93	+137	+ 81	+ 75	+ 54	+124	+ 10	+ 56
MEANS 10 DAYS		+ 60	- 42	- 1	+ 14	- 12	+ 8	+ 58	+144	+207	+186	+158	+ 17	- 12	- 38	- 51	- 42	+ 12	+103	+102	+ 96	+ 30	+ 58	+ 31	- 1	+ 45

* = 10 LEAST DISTURBED DAYS

TABLE 179

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1937

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

MARCH 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE OM										LENGTH IN KMS										DIRECTION N 17°.8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		- 17	-118	+146	+342	+269	0	+336	+689	+ 84	- 62	-672	-420	-554	+123	+146	+672	+213	+291	+174	+426	0	-118	- 50	+ 50	+ 81																
2		+207	+140	+118	-431	- 50	+297	+302	+386	-476	+ 50	-213	- 28	-162	-118	+112	0	- 11	+123	- 95	- 56	- 34	- 11	- 50	- 11	0																
3	X	- 56	-118	- 56	- 17	+ 56	+106	+185	+302	- 39	-274	-269	-342	-347	-235	- 67	+ 56	+112	+112	+ 62	+ 62	+101	0	+ 17	+ 45	- 25																
4		+ 50	- 50	- 50	- 45	- 17	-118	0	+426	+230	- 56	-280	-342	-274	-174	- 50	0	- 28	- 73	+106	+157	+ 50	+224	+274	-297	- 14																
5		+ 22	+106	+683	+1378	+280	-123	-336	+252	+202	-168	-112	+106	-140	+246	+ 45	+566	+118	+134	+112	-140	-112	- 34	- 67	- 34	+124																
6	X	- 11	- 22	- 28	+ 22	- 17	+ 62	+269	+336	+112	-123	-280	-213	-174	-157	-224	-140	-106	- 62	+ 45	+ 56	- 11	- 22	- 56	- 45	- 33																
7	X	- 50	- 56	- 22	0	+ 39	+ 78	+174	+202	-118	-297	-370	-274	-157	0	+ 17	+ 17	- 39	+ 62	+106	+101	- 22	- 17	- 34	- 50	- 30																
8	X	- 39	- 11	+ 17	+ 56	0	+ 17	+ 90	+218	+162	0	-218	-314	-230	-202	-168	- 78	+ 17	+ 67	+140	- 50	- 17	+ 50	+ 22	+ 34	- 18																
9		- 28	- 11	+ 78	+ 90	- 28	+ 56	+280	+442	-151	-269	-386	-347	-286	-286	- 50	+ 62	+ 62	+246	+ 17	+ 62	0	- 50	- 50	- 67	- 26																
10	X	- 62	- 50	0	- 22	-157	+168	+314	+577	+179	-190	-392	-448	-291	-179	-101	+168	+ 34	- 62	- 11	+ 45	- 34	- 90	- 50	- 56	- 30																
11	X	- 28	- 34	+ 11	+ 62	+101	+146	+213	+442	+549	-151	-504	-482	-403	-291	- 56	+ 62	+112	+129	+ 56	+ 56	+ 34	- 50	- 62	- 56	- 6																
12	X	- 62	- 45	- 17	+ 28	+ 45	+106	+185	+381	+235	-162	-448	-459	-342	-297	-213	0	+ 50	+123	+ 56	+ 45	- 34	+ 84	-112	0	- 36																
13		- 73	-106	+ 17	+ 45	+ 67	+ 56	+112	+336	+336	-213	-644	-465	-274	-162	+ 62	+358	+571	+655	+543	+218	+538	+ 34	- 73	+ 56	+ 83																
14		-274	- 62	+ 50	-319	+ 34	+ 90	+190	+560	+398	- 90	-543	-633	-274	-448	-179	0	+ 17	+140	+ 56	0	+ 45	+106	+ 34	+661	- 18																
15		+280	+364	+106	+258	- 56	-442	-325	+538	+734	+280	-190	-157	-118	-168	-314	-174	+ 28	- 78	+ 56	- 50	+ 11	- 34	- 78	- 50	+ 18																
16		- 11	- 78	0	+ 28	0	+ 22	+ 50	+213	+ 50	-358	-375	-560	-168	-218	+ 90	0	+118	+ 95	+162	+213	- 56	- 78	- 11	0	- 36																
17		+162	+ 73	-106	- 90	- 11	0	+179	+364	+280	-123	-347	-459	-560	-549	+ 28	+ 62	0	+196	+118	+ 45	+118	+ 56	+106	+274	- 8																
18	X	- 56	-106	-168	-308	+ 62	+ 67	+174	+336	+476	+118	-426	-476	-448	-403	- 84	-179	+112	+157	+ 84	+ 62	- 45	+ 17	0	- 50	- 45																
19	X	- 28	- 56	+ 56	+ 17	-112	+ 73	+190	+420	+224	+ 34	-274	-336	-336	-218	-274	- 90	0	+218	+101	+112	+151	+174	+ 50	+ 17	+ 5																
20	X	- 50	- 56	+ 62	- 50	- 62	- 17	+213	+286	+342	- 50	-302	-330	-386	-286	-269	- 67	- 56	+ 90	+ 45	+ 17	- 50	+ 28	+ 67	+ 45	- 35																
21		+ 56	- 62	- 56	- 17	+ 11	+ 73	+280	+549	+123	-174	-622	-498	-493	-314	- 28	-123	- 78	+498	+ 17	- 45	- 28	+168	+493	-252	- 22																
22		- 84	-134	- 50	+756	+174	-308	+829	+ 84	+330	+269	+118	-106	-179	- 95	-386	-106	+230	+162	+ 90	+ 56	+112	+179	-274	+ 84	+ 73																
23		+ 62	- 11	-118	-101	+140	+ 78	+190	+448	+286	-168	-230	-174	-258	-118	-101	0	+ 50	+157	+146	+ 22	+ 67	+112	+ 22	+179	+ 28																
24		+ 45	+118	+106	- 90	+ 45	+ 73	+230	+571	+510	+112	0	-213	-448	-448	-420	- 28	- 62	+224	+134	+ 11	- 45	+ 45	+ 34	+ 50	+ 23																
25		+ 62	+179	-140	+286	0	+101	+190	+672	+274	-157	-448	-314	-168	-218	-162	+ 11	- 11	+ 11	+112	+101	- 11	- 28	-106	- 11	+ 9																
26		- 67	- 84	+ 39	+ 84	+ 84	+ 78	+ 67	+526	+465	+ 17	-157	-398	-454	-392	-426	+202	+347	+650	+353	+106	+577	+101	-174	+118	+ 69																
27		+ 34	- 34	-414	+717	- 39	-482	+235	+316	+218	+162	-162	-174	-168	-263	- 17	+286	+286	+386	0	-134	+448	- 90	+106	-140	+ 87																
28		- 90	-381	-174	+162	- 56	+ 78	+230	+487	+286	-118	-403	-336	-230	-286	- 50	-157	- 67	+ 56	+ 56	+213	+ 62	-162	-112	-123	- 46																
29		- 50	- 78	-112	- 45	- 67	+ 84	+330	+672	+448	+ 50	-280	-409	-414	-493	-487	-218	+ 17	+101	+146	+140	+ 90	+235	- 62	- 56	- 19																
30		-101	- 90	-106	- 45	- 45	+ 34	+235	+560	+330	+224	-426	-330	- 56	-616	-386	-168	+ 22	+ 56	+ 56	+157	-218	+487	+344	+874	+ 75																
31		+882	+190	+252	-638	- 17	- 90	+101	- 17	+ 90	- 73	- 56	-280	+ 56	-224	-157	+162	-190	+ 73	0	-112	-112	- 73	- 90	- 84	+ 25																
MEANS ALL DAYS		+ 52	- 22	+ 4	+ 68	+ 22	+ 12	+184	+438	+231	- 63	-320	-329	-282	-242	-134	+ 37	+ 60	+159	+ 98	+ 61	+ 51	+ 40	+ 34	+ 36	+ 8																
MEANS 10 DAYS		- 44	- 55	- 14	- 21	- 4	+ 81	+201	+350	+212	-110	-348	-367	-311	-227	-144	- 25	+ 24	+ 83	+ 68	+ 51	+ 7	+ 17	- 16	- 12	- 25																

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	COMPONENT EASTWARD										LINE ON		LENGTH IN KMS 93.9										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24									
1		- 23	-309	+ 92	+315	+183	-201	+ 97	+252	+109	+126	-229	-339	-183	+636	+607	+756	-292	+206	+ 92	+493	- 63	-304	0	+ 63	+ 87								
2		-109	+275	+ 86	-275	-206	+149	+ 34	+332	-269	+ 23	+ 74	+258	- 23	- 86	+149	- 40	- 17	+115	- 57	-109	- 69	- 29	0	0	+ 9								
3	X	- 52	-126	- 63	- 57	+ 11	+ 46	+ 46	+ 86	-115	-149	- 11	- 69	- 69	- 86	- 80	- 57	+ 46	+115	+ 57	+ 11	+ 46	- 34	0	- 46	- 23								
4		+ 34	- 86	- 63	- 69	- 80	-143	-218	+453	+143	0	- 63	- 63	0	0	+ 46	+ 52	+ 23	- 34	+155	+229	0	+395	+195	- 86	+ 34								
5		+ 23	- 52	+470	+917	+1266	+413	-315	-304	+258	+143	+149	+344	- 52	+395	+384	+642	+229	+120	+ 11	-126	-115	- 57	- 17	+ 11	+197								
6	X	+ 46	+103	+ 57	+143	+149	+160	+344	+395	+229	+ 63	- 46	+103	+138	+178	- 52	0	- 57	- 17	+ 34	+ 63	+ 11	+ 46	0	- 11	+ 87								
7	X	- 52	- 57	+ 11	0	0	0	+ 57	+ 57	- 52	-103	-183	-120	+ 11	+126	+ 97	+ 34	0	+120	+109	+115	+ 29	+ 52	+ 46	+ 46	+ 14								
8	X	+ 29	0	+ 46	+ 69	0	+ 34	+ 52	+160	+138	+ 52	- 63	- 69	- 34	-103	-109	- 34	+ 63	+178	+281	+ 63	+132	+178	- 63	- 46	+ 40								
9		- 17	- 40	+103	+103	+ 52	+ 92	+286	+401	- 23	-166	-183	-138	+ 29	- 69	+ 52	+ 63	+ 46	+281	+115	+103	+ 17	0	+ 63	- 17	+ 48								
10	X	- 63	- 11	- 34	- 63	-120	+ 63	+275	+390	+172	+ 17	-172	-246	- 52	- 63	- 29	+178	+138	- 52	+ 52	+ 80	+ 46	- 34	0	0	+ 20								
11	X	+ 11	0	+ 23	+ 63	+ 57	+120	+115	+281	+321	0	-281	-223	- 63	-120	- 52	-103	- 17	+149	+120	+ 52	+ 17	- 17	0	0	+ 19								
12	X	- 34	- 23	- 17	+ 17	+ 34	+ 80	+ 69	+183	+138	- 74	-229	-120	- 46	- 92	-138	- 69	+ 63	+103	+ 80	+ 52	+103	+258	+ 97	+235	+ 28								
13		+109	+ 17	+ 52	+ 63	+ 92	+ 69	+ 34	+235	+286	- 23	-252	-103	+ 52	+120	+344	+688	+974	+837	+435	+539	- 86	-372	- 29	+120	+175								
14		-138	+ 29	- 23	-109	+ 57	+178	+195	+458	+521	+206	-103	-344	+138	-178	+ 17	+ 69	+ 34	+178	- 63	- 63	0	+ 52	+ 46	+825	+ 83								
15		+241	+292	-206	-321	+332	+367	-321	+458	+413	+338	+143	+241	+201	+ 97	-126	-195	- 29	-166	+115	+ 52	+ 63	+ 63	+ 57	+103	+ 92								
16		+138	+ 74	+115	+115	+109	+183	+665	+693	+252	- 11	+ 11	+ 29	+413	+322	+556	+183	+258	+292	+315	+378	+138	+ 29	+ 63	+120	+227								
17		0	+115	+ 92	- 11	+ 92	+ 63	+160	+309	+493	+178	-109	+ 34	-160	-160	+258	-103	- 97	+172	+149	+ 63	+126	+115	+235	+332	+ 98								
18	X	0	+ 52	+ 63	-160	+172	+183	+241	+275	+447	+286	-235	-201	+ 11	+ 86	+264	- 97	+ 63	+172	+178	+ 57	0	+ 57	+ 80	- 11	+ 83								
19	X	+ 17	- 92	+103	+115	- 46	+115	+166	+223	+172	+ 74	0	+109	+ 11	+103	- 63	-103	0	+223	+ 69	+115	+160	+178	+ 11	0	+ 69								
20	X	- 57	- 69	+ 57	- 11	+ 63	+103	+183	+241	+304	+ 29	-149	- 29	- 23	+ 17	-126	- 63	- 69	+120	+ 92	+ 57	- 6	+69	+ 69	+ 46	+ 35								
21		+ 34	- 46	-109	+ 23	+ 46	+115	+178	+350	+132	-275	-344	-120	- 86	- 69	+132	-115	- 57	+476	+ 92	- 52	0	+269	+607	-258	+ 38								
22		- 86	-195	+ 63	+642	+367	-149	+877	+120	+361	+206	+132	+ 52	+149	+195	-424	- 86	+252	+344	- 57	+ 52	- 11	-115	-183	+246	+115								
23		+229	+160	+ 52	+126	+178	+286	+573	+166	+115	- 63	+ 80	+138	0	- 52	-115	- 46	+ 57	+183	+172	+ 52	+ 17	+ 11	0	+126	+102								
24		0	+ 63	+ 69	- 69	- 46	+ 57	+115	+413	+435	+ 63	+126	+235	-109	-206	-246	+ 23	-183	+149	+115	+ 23	- 80	+ 52	+ 57	+ 46	+ 46								
25		-109	+ 80	-143	+286	- 29	+ 23	+ 86	+401	+160	-103	-235	+ 46	+138	+ 34	+ 52	- 11	-109	- 57	+120	+ 63	- 34	- 34	0	- 46	+ 24								
26		+ 29	- 80	- 52	- 17	+120	+ 63	+ 92	+286	+315	+115	+ 63	0	- 69	-166	-321	- 74	+252	+699	+401	- 86	+688	+ 23	-212	-126	+ 81								
27		-126	-183	-160	+636	+143	-613	+401	+1231	- 74	+229	+172	+464	+372	-195	-143	+292	+ 17	+258	- 63	- 74	+315	-143	+ 63	- 74	+114								
28		-206	-464	-160	+120	- 34	- 17	0	+286	+120	- 63	-172	- 52	+120	- 34	+195	- 52	-103	+ 23	-109	+109	+ 86	-103	-109	- 92	- 30								
29		- 57	- 52	- 63	- 46	- 17	+160	+304	+630	+516	+252	+ 34	+ 23	- 17	-160	-178	- 11	+ 52	+ 57	+103	+ 52	+ 69	-120	+115	+ 11	+ 69								
30		-103	- 63	- 86	- 34	- 52	- 11	+ 74	+ 57	+109	+275	-115	+103	+499	-350	-160	-103	+ 17	+ 23	+ 57	+120	-172	+871	+232	+223	+200								
31		+1650	-143	+837	-286	+ 92	+115	0	-258	- 52	- 52	+126	+126	+327	+ 34	+149	+149	-298	- 57	-109	-229	- 57	-109	-109	- 86	+ 73								
MEANS ALL DAYS		+ 44	- 27	+ 39	+ 72	+ 96	+ 67	+157	+299	+196	+ 51	- 67	+ 2	+ 52	+ 5	+ 30	+ 57	+ 41	+168	+ 99	+ 73	+ 44	+ 40	+ 75	+ 53	+ 70								
MEANS 10 DAYS		- 16	- 22	+ 25	+ 12	+ 32	+ 90	+155	+229	+175	+ 20	-137	- 86	- 12	+ 5	- 29	- 31	+ 23	+111	+107	+ 66	+ 54	+ 75	+ 24	+ 21	+ 37								

* = 10 LEAST DISTURBED DAYS

TABLE 181

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1937
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
APRIL 1937

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 90	- 90	+ 45	- 17	0	+101	+259	+388	+ 56	- 67	-287	-393	-247	-455	-281	+ 56	+ 51	+169	+281	- 62	-112	- 90	-405	+225	- 40
2		+169	-152	+ 62	-393	+540	- 79	+163	+315	+101	-174	-197	-163	-543	-371	- 45	+191	+118	+ 90	+118	+169	- 62	+259	+180	+ 62	+ 15
3		+ 79	+253	+174	-303	-579	+135	+281	+348	+174	- 51	- 28	-332	-506	-298	-225	-112	- 11	+169	+174	+118	- 17	- 90	- 62	+ 62	- 27
4	X	- 62	- 34	- 73	+ 17	- 56	+ 51	- 56	+461	+ 51	-225	-292	-275	-101	-140	+ 17	+ 45	- 17	+112	+ 34	+ 22	-124	- 56	- 51	0	- 31
5	X	0	+ 67	+ 34	- 11	- 11	+118	+360	+680	+ 11	-259	-382	-382	-287	-225	-292	-242	-163	- 45	+ 62	- 67	- 11	- 28	- 62	- 34	- 49
6		- 51	+ 62	+ 62	+112	+ 51	+107	+152	+354	+287	- 22	-388	-405	-287	-382	-227	-157	- 45	+ 84	+112	+ 73	+ 28	- 51	+ 51	+ 51	- 22
7		+ 62	+ 79	+ 28	+ 22	+ 51	+174	+388	+506	+135	-202	-450	-332	-146	-174	-174	-315	- 96	+112	+101	+ 73	+ 90	0	+118	+ 67	+ 5
8	X	+112	+101	+101	+ 73	- 67	+146	+348	+719	+495	- 56	-500	-534	-399	-393	-343	- 51	- 11	+214	+180	+185	+ 62	0	0	+ 22	+ 17
9	X	+ 11	+ 11	+ 62	+ 17	+ 62	+101	+230	+562	+455	+ 17	-455	-500	-382	-236	-163	- 90	+ 51	+118	+ 90	+ 56	- 34	- 67	- 51	- 17	- 6
10		- 11	+ 34	+ 67	+107	+112	+163	+348	+562	+393	-332	-618	-506	-348	-298	-253	+146	+163	+303	+809	+ 90	-157	-281	- 67	-135	+ 12
11		-169	-169	+225	+129	+118	+129	+315	+613	+590	+ 34	-472	-573	-500	-393	-275	-163	-107	+169	+ 62	+ 62	+101	+ 17	- 28	- 45	- 14
12		- 45	-146	- 73	-135	- 11	+303	+219	+1000	+259	+112	-393	-140	-270	-253	-107	+197	- 67	+478	-107	- 34	+ 51	0	+ 51	+112	+ 42
13	X	+214	+ 67	- 62	- 90	+135	-118	+146	+236	+337	+253	- 51	-253	-292	-281	-388	-337	- 51	+ 62	+157	+163	0	+ 79	+ 67	- 56	- 3
14	X	- 51	0	+ 22	0	0	0	+135	+287	+315	+101	-174	-309	-270	-348	-275	-213	- 67	+116	+122	0	- 55	- 18	- 43	- 67	- 33
15	X	- 91	+ 49	- 67	- 18	- 73	- 18	+ 12	+274	+262	+171	-116	-378	-335	-420	-256	-219	- 61	+ 61	+134	+ 67	- 49	- 37	0	+ 55	- 44
16	X	+ 61	+ 67	+ 55	- 67	-268	+195	+298	+420	+274	+ 37	-426	-469	-304	-298	-238	-250	-171	+ 55	+164	+ 55	0	+183	- 18	+ 6	- 27
17		- 49	-110	- 97	- 24	- 24	+ 97	+353	+426	+244	-128	-231	-177	-134	+ 55	+ 30	-359	-396	+ 61	+426	+ 49	-244	- 61	+110	+ 55	- 5
18		-116	- 91	- 55	-116	- 37	+457	+292	+499	+353	+ 97	-177	-353	-414	-396	-231	-171	+122	+ 61	+ 49	- 18	- 97	+ 73	- 37	- 30	- 14
19		- 85	- 67	- 61	-152	+164	+183	+311	+378	+554	- 67	-317	-274	-177	-219	+146	+ 30	+ 43	- 24	+ 73	+347	- 73	-244	- 37	+ 30	+ 19
20		- 55	+238	- 55	-177	- 49	+ 55	+207	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21		..	..	..	..	..	..	..	..	-116	-311	-359	-292	- 79	- 79	-304	-146	+122	+311	+304	+ 97	+ 61	+ 49	+ 61	+ 67	..
22	X	+122	+122	+122	+ 97	+ 85	+128	+396	+475	+329	- 97	-457	-639	-414	-396	-171	+110	+353	+183	+116	+ 85	- 18	+ 67	+ 24	+ 61	+ 28
23	X	+ 67	0	+ 61	0	+128	+201	+481	+664	+231	-189	-487	-609	-420	-238	-238	+ 55	+288	+ 67	+158	+128	+ 55	- 55	- 18	+ 79	+ 16
24		+ 85	+ 97	- 55	+ 91	+ 67	+ 85	+353	+670	+518	-572	-512	-664	-438	+371	+670	+968	-390	+1498	+999	+445	+183	+219	+189	+183	+211
25		+286	+ 55	- 24	+ 37	+ 61	+244	+371	+493	+365	+219	-621	-639	+164	+840	+828	+883	+1693	+371	+219	- 30	+341	+244	+438	+104	+289
26		+ 37	+171	+ 67	+116	+ 79	+134	+329	+438	+347	+219	..	..	..	..	..	..	+950	+999	+1163	+670	+219	- 55	-171	-621	..
27		+ 61	+ 85	- 61	- 12	+ 61	+195	+414	+493	+347	-268	-432	-572	-280	-572	-231	-336	-231	+804	+1029	+688	+755	+432	+1949	+853	+ 51
28		-371	+1218	+877	+1157	+1790	+579	0	+ 30	+609	-420	+238	-420	-402	- 67	-177	+498	- 49	+ 91	+ 67	+ 49	+ 61	+ 61	+ 91	-250	+209
29		+110	+238	- 61	+317	+177	- 49	+183	+268	+317	+189	-201	-432	-432	-244	-213	- 91	+219	+487	+195	+213	-177	-189	+219	+ 49	+ 46
30		+244	- 18	+ 43	+ 30	- 30	+ 91	+158	+ 73	+ 49	-195	-402	-238	-365	-292	-268	+213	+481	+365	+475	+134	+201	-177	-158	+134	+ 23
MEANS ALL DAYS		+ 18	+ 64	+ 50	+ 32	+ 91	+138	+256	+452	+300	- 78	-327	-406	-316	-227	-129	+ 6	+ 58	+226	+234	+114	+ 25	+ 7	- 54	+ 58	+ 25
MEANS 10 DAYS		+ 38	+ 45	+ 26	+ 2	- 6	+ 80	+235	+478	+276	- 25	-336	-435	-320	-278	-235	-119	+ 13	+ 94	+122	+ 69	- 17	+ 7	- 15	+ 5	- 13

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-133	-144	+17	0	+23	+92	+115	+121	+46	-35	-58	+29	+63	-167	+63	+150	-17	+69	+213	-52	-110	-138	-398	+58	-8						
2		-6	+179	-104	-490	+577	+75	+46	+104	0	-81	+173	+415	-46	-110	+162	+75	+115	+127	+346	+237	-156	..	..	..	..		
3		..	..	..	..	..	..	..	..	+196	-17	+179	+144	-173	+144	-75	+58	-58	+115	+63	+110	-12	-167	-110	-23	..
4	X	+63	+92	-63	+115	+12	+58	+92	+346	0	-173	-52	+115	+190	+162	+58	-63	0	+63	-23	+46	-179	-29	-12	0	+34						
5	X	0	+46	+12	-12	-52	+46	+185	+565	+121	-63	+35	-58	0	0	-179	-231	-190	-115	+17	-121	+46	-35	-58	-35	-3						
6		-46	+58	+75	+115	+29	-40	-58	+17	+167	+29	-115	-12	+92	-63	-173	-179	-121	-46	+75	+58	+52	-52	+46	+52	-2						
7		0	+63	-58	-110	-63	+110	+231	+306	+110	-92	-144	-110	+63	+35	-121	-179	-121	+63	+92	+121	+173	+46	+173	+75	+28						
8	X	+121	+104	+92	+52	-58	+75	+173	+514	+404	+150	-92	-225	-167	-242	-340	-121	-144	+104	+179	+231	+110	+23	+52	+46	+43						
9	X	-35	-35	+46	-63	+35	0	+121	+392	+352	+167	-63	-121	-110	-121	-127	-121	-63	+58	+58	+63	0	0	0	0	+18						
10		-35	+46	+52	+58	+52	+69	+179	+323	+277	-87	-144	-121	-138	-179	-179	+121	+98	+277	+790	+375	-81	-277	+46	-167	+56						
11		-138	-185	+92	+121	+115	+75	+110	+242	+237	+190	+179	-104	-127	-81	-167	-231	-92	+35	+58	+127	+127	+104	+23	-12	+29						
12		-52	-242	-260	-352	-138	+237	+294	+744	+329	+467	+237	+375	+144	+219	-52	-35	-127	+606	-346	-277	-52	0	+12	+121	+77						
13	X	+63	+115	+35	-75	+121	-144	-35	+75	+260	+312	+231	+115	+75	+40	-162	-294	-179	-138	+58	+121	+46	+121	+110	-92	+32						
14	X	-17	+63	+63	+23	+12	-29	+17	+104	+121	+75	+63	+127	+127	-52	-52	-131	-112	-62	-19	-62	0	0	+56	-75	+10						
15	X	-69	+50	-50	0	0	-38	-69	+194	+181	+125	+162	-56	-175	-156	-50	-156	-119	-62	+62	+62	0	-12	+56	+62	-2						
16	X	+50	+81	+62	+75	-219	+138	+81	+256	+188	+175	-75	-125	-25	-75	-75	-188	-125	-50	+112	+50	-12	+112	+69	+31	+21						
17		0	-175	-175	-56	-38	-31	+194	+288	+131	+12	+69	+112	+131	+388	+188	-325	-350	+56	+531	+300	-306	-25	+38	-144	+34						
18		-62	-119	-38	-125	-38	+325	+38	+306	+238	+350	+250	+56	-200	-212	-75	-44	+131	-25	+50	-38	-131	-56	-100	+112	+25						
19		0	-69	-100	-125	+131	+62	+119	+281	+425	+81	+56	+88	+119	-62	+219	-88	+56	-56	0	+181	-219	-50	+25	-256	+34						
20		+181	+200	+69	-131	-19	-12	-56	..	..	..	..	..	..	..	..	..	..	..	..	..	+675	-56	-225	-100	..
21		+25	-69	+175	+138	-62	+131	+138	+44	-56	-56	+69	+94	+88	-19	-256	-319	-125	+156	+200	+100	+38	0	+31	-25	+18						
22	X	+50	-38	+56	0	0	0	+162	+369	+406	+194	-69	-306	-175	-338	-150	-50	+181	+100	+81	+50	0	+69	+69	+56	+30						
23	X	+69	-56	-12	-56	+62	0	+134	+512	+431	0	-100	-288	-144	-156	-162	+156	+300	+56	+56	+156	-38	-181	+50	+69	+38						
24		+62	+75	+62	+56	+44	-556	-50	+319	+381	-181	-275	-150	+212	+950	..	..	..	..	+25	-56	-69	+81	+112	-169	..		
25		+131	-75	-94	-50	0	+69	+188	+262	+188	..	..	..	..	..	..	..	..	+525	-50	-231	+400	-431	+288	-188	..
26		-56	+181	+31	-44	-12	-12	+150	+175	+312	..	..	..	..	..	..	..	+950	+962	+1725	+281	-162	-50	-300	-412	..
27		-50	+94	-69	-69	0	+100	+250	+294	+400	0	-131	-162	+275	-325	-175	-612	-162	+812	+388	+788	+856	+562	+1662	+1794	+133						
28		+1281	+1519	+85	+1244	+281	+688	+244	-406	+794	-431	+425	-462	-350	-212	-225	+62	-344	-131	+50	+94	+50	-12	+56	-344	-46						
29		-50	+212	-62	+94	-19	-150	0	+250	+194	+531	+56	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	+94	+188	+125	+19	-19	-250	-194	-125	+188	+450	+188	+369	+125	-88	-194	-175	+200	..
MEANS ALL DAYS		-67	+55	+2	-72	+9	+87	+126	+268	+253	+63	+33	-47	-11	-73	-100	-131	-74	+80	+122	+108	+17	+8	-60	+60	+27						
MEANS 10 DAYS		+30	+42	+24	+6	-9	+11	+92	+333	+246	+96	+4	-82	-40	-94	-124	-120	-45	-5	+58	+60	-3	+7	+39	+6	+22						

* = 10 LEAST DISTURBED DAYS

TABLE 183

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHWEST										LENGTH IN KMS 58.4										DIRECTION N 17.8 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+184	+31	-61	-435	-123	+313	+123	+294	+123	+159	+74	-184	-313	-503	-239	-49	-61	+251	0	+135	+123	0	-18	+116	-2					
2	X	-80	-31	-31	+123	0	+135	+423	+509	+147	-116	-251	-215	-166	-190	-116	-98	+49	+55	+123	+61	+12	0	+49	-37	+15					
3		+190	+129	+49	+18	+67	+129	+356	+417	+153	-294	-582	-441	-313	-12	-37	+55	+313	+61	-25	+116	-31	+74	-55	+6	+14					
4		+98	+92	+86	+141	+141	+184	+368	+300	-147	-619	-680	-460	-239	-86	+116	+221	+644	+889	+1821	+123	+67	+889	+454	+2336	+86					
5		+1661	+515	-208	+221	-166	-809	+319	+239	-1103	-208	-92	-6	+67	+153	+123	+116	+110	-55	-25	-49	-92	-178	-49	-12	+20					
6	X	+37	+31	-12	+61	+61	0	+190	+306	+129	-184	-239	-178	-153	-184	-116	+67	+86	-31	-123	-25	+18	-74	-55	-25	-17					
7	X	0	-31	+18	+12	+61	+129	+294	+429	+319	-202	-497	-613	-582	-306	-37	+325	+245	+276	+159	+18	0	-25	-18	+49	+1					
8	X	-37	-49	+172	+178	+18	+55	+294	+441	+221	-49	-343	-601	-398	-147	-129	+178	+110	+123	-31	-61	-110	+67	+37	-55	-5					
9		-49	+276	+129	+429	-31	-67	+294	+938	+25	-368	-687	-552	-435	-172	-147	-31	+245	+662	+251	+178	+435	-515	+300	-245	+36					
10		-184	-300	-67	-12	+184	+294	+539	+490	+331	-215	-558	-521	-398	-300	-55	-74	+251	+497	+435	-25	+325	+141	-251	+49	+24					
11	X	-61	-110	-141	+215	+251	+233	+245	+313	+116	-221	-613	-803	-613	-331	-55	+196	+313	+306	+123	0	+31	-61	-12	+49	-26					
12	X	+67	-49	-116	+55	+61	+129	+313	+460	+306	-184	-680	-711	-423	-300	-18	+55	+172	+245	+135	+49	0	-18	-116	+123	-19					
13	X	+184	+31	+55	+67	+135	+196	+294	+429	+362	-129	-613	-552	-484	-135	-18	+74	+172	+135	+49	+61	+67	-25	-147	+172	+16					
14		+196	-49	-172	-37	-116	+123	+601	+515	+435	+221	-392	-625	-435	-337	-153	+129	+98	+67	+202	+294	+208	-190	-31	0	+23					
15		-178	+80	-55	-116	+74	+129	+98	+490	+257	+61	-233	-159	-245	-245	-251	-116	-61	+503	+294	-110	-221	-178	+159	+43	+1					
16		+190	-153	-141	-25	+49	+123	+398	+411	+398	-166	-245	-343	-294	-447	-239	-12	+215	+74	+178	0	+61	-49	-67	+98	+1					
17	X	+67	-61	-61	+18	+18	+251	+515	+803	+429	+25	-245	-607	-570	-454	-294	-123	-12	+67	0	-55	-74	0	+18	+159	-11					
18		-61	-18	0	+92	+98	+159	+527	+674	+490	-135	-742	-680	-331	-337	+190	+282	+251	+319	0	-129	+12	+49	+80	+319	+46					
19		-257	+319	+362	+306	-129	-67	+196	+374	+392	-37	-251	-362	-276	-251	-135	-61	0	+61	+37	-110	-110	-74	-61	-55	-8					
20	X	-55	-12	-110	-61	+129	+233	+172	+245	+80	-215	-558	-398	-12	+61	+116	+67	+129	-31	0	-61	-116	-74	+12	+55	-17					
21		+55	-61	+110	+55	0	+32	+497	+558	+147	-294	-1011	-527	-356	-190	-123	+116	+215	+251	+172	+12	-18	-49	+12	+67	-11					
22		+49	-55	+67	-129	+490	+215	+325	+558	+282	-67	-564	-638	-478	-343	-141	+110	+135	+110	+61	+116	+208	+184	+178	+110	+33					
23	X	-245	+123	+31	+92	+129	+159	+319	+772	+153	-67	-546	-546	-306	-196	-184	-61	+245	+110	0	-31	-129	-98	-37	-12	-14					
24		0	0	+61	+49	+110	+184	+331	+625	+392	+153	-233	-546	-613	-601	-313	-74	+233	+306	+380	+356	+699	-147	-319	-123	+38					
25		+190	+239	+294	-337	+484	+221	+306	+558	+674	+208	-803	-674	-668	-466	0	+123	+178	+380	+484	-368	+110	+196	-343	+521	+63					
26		-31	+282	+61	-61	+123	+276	+319	+374	+245	-141	-380	-809	-766	-337	-239	+362	+221	+233	+392	+74	+18	+67	+49	-67	+11					
27		-129	-61	+172	+129	+276	+86	-159	+515	+337	-37	-67	-343	-576	-282	+12	+306	+533	+558	-270	-319	+1067	-172	+208	+221	+84					
28		+215	-135	-441	+711	+613	+613	+208	-49	+282	+368	+147	+49	-92	+67	+37	+313	+644	+490	+858	-31	+129	-650	+680	-116	+205					
29		-270	-582	+239	+221	+313	+484	+539	+490	+521	+110	-190	-202	-319	-227	+104	+74	+110	+190	-49	0	+184	-98	0	+25	+69					
30		+37	-12	+31	+61	+300	+49	+398	+306	+650	+184	-490	-564	-251	-61	-31	+61	+178	+515	+662	+325	-98	-257	-49	0	+81					
31		+12	-49	-25	+67	+129	+239	+362	+447	+313	-61	-374	-454	-368	-251	-172	-49	+356	+245	+74	+147	-116	+245	+380	+116	+51					
MEANS ALL DAYS		+58	+11	+10	+65	+121	+145	+323	+459	+240	-81	-417	-460	-368	-239	-82	+80	+204	+256	+205	+22	+86	-33	+32	-25	+25					
MEANS 10 DAYS		-12	-16	-20	+68	+86	+152	+306	+471	+226	-134	-458	-522	-371	-218	-85	+68	+151	+126	+44	-4	-30	-31	-27	+48	-8					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE OW										LENGTH IN KMS										93.9 DIRECTION E.O. 5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		+ 69	- 50	-138	-300	-131	- 56	- 38	+125	+138	+188	+257	+156	-244	-257	- 38	- 56	-182	+ 75	-144	- 56	+125	0	- 50	+ 50	- 23																
2	X	- 75	- 63	- 75	+ 50	- 63	- 38	+ 75	+244	+150	+ 13	- 69	+ 63	- 56	- 50	- 50	- 63	+ 19	0	+ 63	- 50	-113	- 88	0	- 81	- 11																
3		- 81	+138	+100	- 19	+ 13	+ 63	+175	+257	+175	+ 19	-376	-163	-219	- 56	- 19	+125	+526	+ 25	+ 44	+144	- 56	-144	-244	-125	+ 13																
4		- 31	- 63	- 63	+ 63	+ 63	+ 38	+225	+319	- 38	-401	-376	-194	+ 69	+313	+232	+426	+795	+1246	+1064	+601	+307	+676	+495	+1947	+159																
5		+1371	+ 81	+ 31	-344	+113	-432	+125	+ 69	-714	- 63	- 38	+ 69	+ 69	+125	+ 63	- 38	- 56	- 63	- 50	+ 25	- 75	-100	- 63	+ 63	+ 2																
6	X	- 50	- 63	- 75	- 56	- 56	-100	+ 69	+200	+188	+113	+ 75	- 50	-113	-131	-119	- 56	+ 50	- 56	-131	-119	-106	- 63	- 75	- 75	- 33																
7	X	- 81	-119	- 56	-100	- 63	- 75	+ 38	+275	+319	+307	0	-294	-444	-344	-119	+131	+ 75	+225	+113	- 25	0	- 13	- 31	- 13	- 12																
8	X	- 38	-131	+100	+125	0	-100	+ 88	+319	+194	+ 88	-150	-319	-175	- 50	- 63	+138	+ 69	0	- 63	-119	- 19	- 25	- 56	- 69	- 11																
9		- 63	+257	-188	+407	- 94	+ 50	+194	+632	+257	- 81	-282	-194	-200	+ 69	- 69	- 19	+200	+438	+332	+100	-131	-344	+344	-225	+ 58																
10		-131	-238	- 94	- 38	+ 69	+ 63	+238	+576	+432	- 19	- 81	- 75	- 63	- 44	0	- 50	+300	+657	+432	-282	+545	+ 75	-319	+188	+ 89																
11	X	0	+ 13	-150	+188	+188	+ 69	+125	+313	+188	+ 50	-138	-488	-376	-125	+ 75	+194	+250	+250	+163	+ 69	+ 81	- 63	- 69	+138	+ 39																
12	X	+ 50	- 36	- 88	- 19	- 69	-182	- 50	+194	+307	+100	182	-282	-200	-125	+131	+100	+ 81	+131	+ 69	+ 13	+ 13	- 38	-125	0	- 9																
13	X	+ 31	+131	+ 31	0	+ 56	+ 50	+ 50	+313	+319	+113	-225	-207	-200	+125	+169	+ 25	+ 69	0	0	+ 31	+ 69	+ 25	-163	- 56	+ 32																
14		+138	+ 50	- 63	- 38	-119	-125	+244	+307	+257	+432	+119	-156	-113	- 38	+138	+363	+ 88	- 25	+ 63	+225	+ 94	- 50	+ 19	- 38	+ 74																
15		-188	+113	0	-125	0	+ 38	- 69	+163	+150	+250	+ 88	+125	- 19	- 69	- 13	0	- 50	+595	- 25	- 25	-188	-163	+125	-175	+ 22																
16		+344	- 50	- 88	- 38	- 31	- 88	+ 81	+194	+451	+144	+ 75	+ 19	- 56	-263	-131	+ 81	+113	- 38	+ 69	+ 81	+ 44	0	- 63	0	+ 35																
17	X	+ 63	0	0	- 56	- 13	+ 69	+257	+520	+426	+175	+244	- 63	-219	-188	-125	- 31	- 56	0	0	0	0	0	- 56	+138	+ 45																
18		+ 13	+ 56	+ 19	+ 69	+ 69	0	+244	+513	+501	+156	-275	-369	+ 50	+ 69	+438	+551	+376	+263	+ 81	+119	+175	+ 88	- 63	+ 89	+160																
19		-150	+563	+495	+319	+ 6	- 69	0	+326	+363	+257	+225	+ 75	0	- 56	+100	+ 75	+ 56	+ 56	+ 13	0	- 13	0	+ 25	+ 25	+112																
20	X	0	+ 50	+ 19	+ 81	+ 69	+ 63	- 50	+ 75	+144	+ 81	-119	- 13	+188	+182	+131	+150	+200	+ 19	+ 63	+113	+ 56	+ 81	+188	+163	+ 81																
21		+175	- 25	+ 94	+ 50	- 31	- 63	+225	+388	+319	- 94	-275	-182	- 38	- 56	- 69	+188	+250	+225	+131	+ 63	+ 25	+ 13	+ 31	+ 69	+ 59																
22		+ 63	- 56	+ 31	-138	+163	+188	+263	+457	+444	+150	-163	-188	-188	-238	- 50	+163	+ 69	- 63	- 63	+ 38	+ 63	+300	+188	-119	+ 55																
23	X	- 69	+ 69	+ 31	+ 25	+ 50	+ 63	+138	+639	+263	+ 56	-194	-182	- 56	- 63	0	+ 75	+300	0	-100	- 50	- 63	- 75	0	- 56	+ 33																
24		0	- 50	+ 13	0	- 13	- 69	+ 63	+326	+313	+244	+175	-100	-288	-313	-188	- 63	+ 69	+219	+188	+376	+288	+ 69	-313	-131	+ 34																
25		0	+363	+313	-269	+438	+ 25	0	+300	+476	+413	-250	-219	-369	-282	+100	- 50	+ 94	+376	+576	-288	- 19	+263	-570	+357	+ 74																
26		- 88	+213	+282	- 56	+ 56	+119	+225	+238	+125	- 63	-113	-313	-432	-106	-150	+275	+ 38	+ 25	+376	+ 50	- 25	+156	- 63	- 63	+ 29																
27		-113	-238	+188	+169	+188	- 75	-125	+ 75	+313	- 50	+326	- 19	+ 69	+125	+476	+232	+538	+326	-394	- 69	+175	+150	+288	+388	+123																
28		+ 63	- 69	-125	+451	+726	+613	+300	+313	+401	+601	+319	+426	+188	+ 94	- 63	+138	+451	+ 31	+664	+250	- 38	-601	+676	+ 31	+243																
29		+213	-131	+163	+250	+257	+307	+363	+376	+319	+182	+ 69	+ 88	- 13	-100	+282	- 94	- 19	+200	-119	- 56	+ 69	- 56	- 63	-113	+ 99																
30		+113	+ 25	+ 19	- 25	+250	+ 38	+188	+319	+507	+326	- 75	-319	-119	+131	- 56	- 81	+113	+351	+257	+363	0	-194	-119	- 25	+ 83																
31		- 31	- 69	- 81	0	+ 50	+ 25	+125	+363	+363	+194	- 56	-219	- 69	-138	- 63	- 50	+150	+119	0	+ 13	+ 94	+200	+313	+194	+ 59																
MEANS		+ 49	+ 22	+ 21	+ 20	+ 69	+ 13	+122	+314	+260	+125	- 47	-116	-117	- 60	+ 31	+ 90	+161	+181	+118	+ 50	+ 44	+ 3	+ 6	- 30	+ 55																
ALL DAYS																																										
MEANS		- 17	- 15	- 26	+ 24	+ 10	- 18	+ 74	+309	+250	+110	- 76	-184	-165	- 77	+ 3	+ 66	+106	- 57	+ 18	- 14	- 8	- 26	- 39	+ 9	+ 15																
10 DAYS																																										

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 185
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-62	+74	-111	-253	+111	+136	+357	+813	+548	+123	-240	-376	-271	-246	-111	-74	-62	+62	+43	+209	-172	-129	-86	-49	+10
2		0	+99	+179	-302	+80	+191	+123	+142	+394	+18	-222	-185	-179	-80	+92	-129	-62	+129	+185	-197	-18	-37	+31	+105	+15
3	X	-55	+111	+18	+18	-12	+105	+136	+302	+234	+136	-394	-493	-382	-234	+99	+148	+68	+111	-123	-74	-62	-31	+37	+62	-11
4		-55	-37	+49	+191	+86	+99	+296	+228	-185	-320	-487	-444	-271	+320	+129	+493	+191	+296	-37	-62	-129	+234	-117	+209	+28
5		-31	+246	-18	-197	+129	+185	+326	+425	+172	0	-172	-487	-333	-179	-154	+326	+665	+764	+407	+499	-160	+148	+253	+246	+119
6		-1096	+462	-253	+721	+172	+314	-265	+314	-74	-277	-567	-308	-197	-31	-55	-12	+253	-68	-111	-197	-74	-74	-74	-62	-65
7	X	-31	+191	+74	+111	+129	+49	+308	+314	+129	-437	-437	-216	-185	-74	-129	+339	+123	+326	-111	-407	-99	-111	0	-99	-10
8	X	+123	+55	+18	+12	+68	+99	+277	+591	+99	-55	-493	-684	-419	-314	+31	+111	+468	+320	-18	-55	+55	+136	-55	+74	+12
9		-62	+12	+129	+160	-117	+246	+370	+444	+179	-55	-554	-801	-616	-444	-203	+172	+308	+197	-37	-74	0	-37	-698	-74	-65
10		+129	+462	+234	+37	+123	+277	+437	+665	+191	-136	-388	-480	-283	-185	-117	+191	+55	+55	+345	+111	-246	-179	-68	+49	+53
11	X	+123	-80	0	+25	+55	+129	+246	+419	-55	-179	-431	-462	-407	-246	+49	+129	+246	+136	+49	-55	-12	0	0	-18	-14
12	X	-49	-62	-12	0	+99	+185	+425	+314	-129	-444	-585	-431	-339	-62	+197	+191	+246	+129	+49	-12	-12	-117	-191	-68	-28
13		-25	-456	-148	+271	+363	+277	+493	+333	+197	-271	-370	-185	-86	+31	+129	+111	+37	+185	-55	-55	-216	-136	-86	+407	+42
14		-129	-117	-49	0	+55	+111	+259	-86	-123	-357	-437	-468	-55	+166	+216	+271	+172	+111	-80	-92	-117	+12	+18	+277	+18
15		-37	+43	-62	-74	+62	+148	+308	+419	+320	-86	-616	-745	-462	-308	-154	+296	+216	+376	+234	+62	+43	+431	-117	-197	+4
16		-68	-74	-49	-62	+74	+185	+407	+480	+437	-240	-462	-567	-357	-302	+259	+160	-99	-55	+493	+92	+111	+68	-55	+99	+20
17		-185	-31	-246	+407	-31	+123	+370	+499	+172	-296	-542	-339	-185	-80	+185	+185	-25	+55	+68	-6	-234	+92	-80	+18	-4
18	X	+80	-129	+179	+253	+240	+160	+259	-62	+185	-191	-431	-431	-419	+86	+142	+197	+191	+68	-80	+31	+129	-37	-62	+37	+13
19		-12	-62	+154	+160	+172	+191	+209	+246	-172	-370	-517	-653	-431	-68	+117	+326	+308	+191	+12	-55	-179	+185	+425	+277	+19
20		-172	-326	-179	+129	+308	+191	+708	+314	+271	-308	-493	-339	+12	-62	+185	+296	+277	+99	-154	-123	-154	-111	+68	-55	+16
21		-111	+49	+148	+166	+185	+197	+302	+209	+117	-253	-431	-314	-425	-62	+25	+123	+49	+68	+68	-49	-129	-49	-43	-55	-9
22		+49	-68	-253	-277	+561	+351	+172	+222	-37	-561	-924	-530	-62	-62	+678	+308	+216	+148	-55	-148	-49	+74	+92	-55	-15
23	X	-12	+55	+86	+80	+154	+314	+370	+142	+246	-246	-733	-715	-480	-253	+74	+246	+277	+92	+55	-62	+179	+55	-55	-246	-16
24		-18	+598	+62	+62	+154	+172	+425	+487	-511	-394	-561	-493	-123	-68	-37	+376	+197	+308	+265	+31	+74	-99	+271	+191	+57
25		+49	+92	+18	-12	-314	+154	+474	+203	+111	-55	-246	-111	-179	-111	-25	+129	+49	+68	+80	-240	-68	+49	-55	-31	+1
26		-31	+62	+129	+68	+117	+277	+499	+567	+253	-296	-591	-554	-320	-123	+129	+191	+172	+37	+62	-185	+407	+197	-246	-55	+32
27		-62	-18	+105	+111	+68	+302	+339	+807	+136	+148	-117	-296	-561	-357	+807	+314	+468	+702	..	..	..	..	..	..	..
28		..	..	..	..	..	..	..	+431	+487	+99	-240	-320	-437	-345	-123	+86	+154	+166	+308	+111	+25	-111	-12	+31	..
29	X	-148	-74	-80	-117	-271	+111	+302	+616	+487	+314	-117	-333	-468	-493	-394	-160	+191	+259	+142	+99	+12	+111	-18	-74	-4
30	X	+62	+68	-12	0	-68	+62	+172	+209	+357	+277	-31	-419	-610	-370	-253	0	+62	+462	+240	+62	+111	+68	+246	+246	+39
MEANS ALL DAYS		-63	+42	0	+56	+93	+183	+305	+355	+141	-160	-442	-455	-308	-142	+36	+178	+174	+168	+78	-34	-36	+20	-24	+33	+8
MEANS 10 DAYS		+3	+21	+16	+13	+50	+135	+295	+366	+210	-70	-389	-456	-398	-221	-30	+113	+181	+196	+25	-26	+13	-6	-18	-36	-1

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	- 56	0	+ 68	-229	+ 50	0	+186	+639	+508	+155	+ 68	+ 50	+105	-174	- 56	- 93	- 74	- 19	- 56	-248	-180	- 68	-118	- 56	+ 37
2		- 37	+ 99	+174	-124	+ 37	+ 12	0	+ 19	+304	+ 68	0	0	- 50	+143	+260	- 62	-118	+118	+174	-180	+ 19	- 56	0	+ 87	+ 37
3	X	0	+ 99	+ 56	+ 50	- 68	- 62	+ 19	+136	+217	+198	-161	-174	- 25	+ 62	+248	+192	- 25	0	-192	- 62	0	- 12	+ 37	+ 99	+ 26
4		- 19	- 62	0	+186	0	- 87	0	- 43	- 62	- 56	-118	-167	- 68	+378	+186	+521	+149	+254	+ 74	+ 12	-186	+ 81	+ 50	+192	+ 51
5		- 62	+285	- 74	-217	+ 50	-161	+118	+229	+279	+341	+322	+112	+ 68	+310	-149	+732	+657	+794	+105	+391	+ 25	+161	+112	- 99	+180
6		-663	+130	- 43	+347	- 37	+112	0	+694	+285	- 74	-490	-285	0	+118	- 31	- 12	+124	- 93	-112	-180	+ 37	- 37	- 62	-118	- 16
7	X	- 62	+124	+149	- 50	- 37	- 68	+ 87	+236	+ 93	-291	-149	+174	+260	+229	- 31	+316	+ 56	+124	-186	-310	0	-136	0	-174	+ 15
8	X	+ 81	- 68	+ 62	- 12	- 56	-143	+ 93	+372	+ 56	+ 62	- 81	-347	- 93	- 87	+ 93	+174	+688	+298	- 62	-136	+ 37	+130	- 74	-112	+ 36
9		- 62	+ 31	+136	+124	-242	+ 25	+ 74	+304	+236	+130	-248	-316	-248	-260	- 56	+248	+254	+124	- 37	- 56	+ 50	- 37	-682	-112	- 26
10		+ 93	+440	+310	+130	+ 74	+112	+304	+422	+279	+124	+ 12	-112	+ 74	+112	+ 50	+254	- 56	-136	+260	+112	- 87	- 74	- 74	+ 37	+111
11	X	+174	+ 68	+ 62	- 56	- 74	- 87	+ 74	+ 62	-118	- 62	-124	- 50	0	+118	+285	+248	+248	+ 62	- 56	+ 12	+ 62	+ 56	+ 37	+ 12	+ 40
12	X	+ 12	- 19	0	0	+ 50	+180	+186	+161	- 31	-322	-236	-136	- 31	+ 68	+248	+211	+124	+ 50	- 37	- 62	0	- 37	-124	- 50	+ 9
13		- 12	-236	-205	+217	+800	- 68	+112	+304	+124	+279	+ 68	+ 74	+ 62	+ 62	+192	+273	+112	- 68	+ 25	+ 62	-136	-124	- 68	+217	+ 86
14		- 62	- 37	-105	- 50	- 68	-130	+ 62	- 68	-273	-372	-130	-174	+236	+428	+341	+384	+254	+192	- 56	- 68	- 56	+ 31	+ 12	+112	+ 17
15		+298	+112	- 56	- 74	- 68	- 43	+ 43	+372	+322	0	-434	-546	-242	- 68	+ 93	+384	+186	+316	+236	+ 50	- 62	+192	-112	- 56	+ 35
16		- 62	- 62	- 68	- 74	- 12	-118	+112	+279	+248	-161	-124	-186	-155	+149	+459	+335	-180	- 68	+273	+192	+ 68	-174	+ 50	+149	+ 36
17		-180	- 62	-149	+211	+ 62	+ 56	0	+229	+310	- 62	-198	+ 62	+130	+ 68	+316	+248	+ 50	- 37	+ 68	- 50	-192	+ 50	- 74	+ 62	+ 38
18	X	+ 99	+ 99	+ 68	+211	+124	0	+136	+ 62	+ 99	- 62	-118	-130	-254	+112	+223	+285	+118	- 62	-124	- 50	0	+ 12	0	- 56	+ 25
19		- 37	-112	+ 68	+112	+ 62	- 68	- 12	+ 56	-155	-180	-118	-304	-254	- 56	+ 87	+298	+285	- 37	+136	+ 50	-130	- 62	+496	+738	+ 36
20		-186	-229	-273	- 37	+155	+124	+192	+192	+310	- 37	-112	+124	+732	+242	+366	+446	+279	- 68	-347	-248	-155	-174	- 56	- 74	+ 49
21		- 74	- 56	+ 68	+ 68	+130	+105	- 56	+ 31	-130	-236	-118	+124	- 19	+192	+ 81	+254	+186	- 68	+112	+124	- 74	- 62	- 12	-161	+ 17
22		+ 62	- 56	-310	-236	+267	+136	+ 62	+112	+112	-248	-670	-217	+161	+279	+880	+428	+360	+186	- 50	-211	- 19	- 37	+112	- 12	+ 45
23	X	+ 19	+ 74	+ 62	+ 68	+ 87	+310	+242	+ 62	+ 68	-174	-298	-124	-155	+124	+298	+254	+248	+ 62	+ 87	- 74	+192	+130	+ 56	-124	+ 64
24		- 56	+465	+236	+ 87	+ 62	+ 62	+310	+465	-273	-198	-316	-112	+254	+ 68	+ 93	+372	+124	+ 87	+254	+267	+ 56	- 19	+174	+248	+113
25		+136	+ 93	+ 68	+ 50	-124	- 19	+205	+ 99	- 99	- 62	- 93	+192	+236	+155	+130	+316	- 74	+ 12	- 62	-329	- 31	-118	- 31	- 25	+ 31
26		- 68	- 87	+136	+ 87	+ 12	+ 99	+254	+192	+ 99	- 62	-223	-217	0	+112	+192	+248	+112	-130	- 99	-298	+ 31	+273	-360	- 31	+ 11
27		- 56	-124	- 68	- 81	- 68	+186	+ 68	+446	- 93	+335	+353	+279	-211	-227	+874	+217	+372	+304	..	..	..	..	..	..	..
28		..	..	..	..	..	..	..	+366	+459	- 68	- 87	+ 56	-180	-143	0	+136	0	+130	+248	+446	+595	+372	+211	+223	..
29	X	+248	+143	+174	+155	+ 12	+161	+130	+440	+310	+366	+223	+ 62	- 37	-118	- 81	0	+248	+124	+ 74	+254	+130	+254	- 37	+ 50	+137
30	X	- 62	+124	+ 62	+ 56	- 56	0	+ 62	+118	+310	+384	+217	0	-124	-124	-105	+ 56	0	+502	+298	0	+174	+ 62	+124	- 50	+ 84
MEANS																										
ALL DAYS		- 19	+ 39	+ 24	+ 36	+ 43	+ 16	+107	+221	+122	- 20	-130	- 94	+ 20	+ 94	+ 65	+261	+155	+ 90	+ 29	- 19	- 15	+ 7	- 22	+ 25	+ 47
MEANS																										
10 DAYS		+ 45	+ 45	+ 76	+ 19	+ 3	+ 29	+122	+229	+151	+ 25	- 66	- 68	- 35	+ 21	+112	+164	+163	+114	- 25	- 18	+ 42	+ 39	- 10	- 46	+ 47

* = 10 LEAST DISTURBED DAYS

TABLE 187

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY													LENGTH IN KMS 58.4													DIRECTION N 17° 8 E												
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN												
1	X	-123	+49	-68	+68	-117	+160	+264	+325	+282	+258	+12	-196	-215	-332	-196	-12	-43	-80	-74	-117	-92	-49	+12	-55	-14												
2	X	+43	-55	-12	-55	+129	+74	+129	+129	-18	-282	-546	-516	-252	+61	+172	+209	+252	+246	+196	+61	-27	+25	-147	+68	-5												
3	X	+141	+233	+160	+61	+123	+129	+276	+74	-80	-368	-368	-375	-184	-43	+49	+190	+123	+147	+123	-55	+49	+68	+92	+86	+27												
4		+172	+135	+178	+135	+129	+147	+184	+49	-61	-301	-418	-338	-184	-55	-55	+12	-117	-61	+74	+233	+184	+246	+252	-12	+22												
5		+98	-61	-117	+325	+147	+233	+172	+233	+190	+92	-430	-608	-368	+172	+74	-61	-37	+178	+368	+129	+117	+135	+98	+123	+50												
6		+68	-25	-55	-332	+135	+270	+460	+356	+675	-338	-276	-362	-92	+190	+375	+344	+553	+239	+61	+221	-381	-86	+68	-276	+75												
7		-154	0	+209	-49	+203	+344	+399	+583	+246	-178	-921	-614	-196	+147	+68	+190	+68	+68	+49	-117	-111	-49	-55	-86	+2												
8	X	-74	+55	+123	+98	+160	+307	+368	+424	+338	-154	-436	-301	-196	-123	+49	+319	+491	+246	0	+68	+68	+252	-55	-18	+84												
9		-55	-12	-18	+117	-301	+246	+399	+737	0	+252	-147	-522	-399	-154	+37	+553	+497	+602	+559	+276	+111	+559	-104	-258	+124												
10		..	..	..	..	..	..	..	..	..	+160	-25	-473	0	-491	-252	0	+424	+553	+418	+68	+31	+129	+55	-55	..			
11		+12	-68	-123	+61	+80	+190	+368	+823	+436	-246	-700	-737	-467	-178	-135	+350	+491	+915	+479	-301	-190	-111	+68	-49	+40												
12	X	+55	+61	-55	+68	+55	+178	+375	+553	+252	-190	-651	-786	-632	-276	-49	+190	+258	+448	+246	-31	+31	-18	+31	+37	+6												
13		-55	0	+92	+196	+111	+246	+307	+239	+252	-49	-424	-442	-479	-442	-123	-147	+399	-55	+190	+68	+246	+381	+626	0	+47												
14		+393	-645	+147	+442	+61	+338	+682	+270	+129	-774	-55	-430	-381	-154	+68	+123	+172	+190	+160	-55	-246	-92	+184	-239	+12												
15	X	-92	-123	-61	-68	+313	+246	+368	+117	+246	-31	-497	-301	-375	-141	-215	+215	+221	+246	+61	-18	-25	-246	+12	-37	-8												
16		-18	-55	-55	+61	-61	+111	+233	+362	0	-92	-368	-768	-614	-68	+111	+25	+135	+190	+55	+80	-55	-31	+31	+227	-24												
17		-147	-61	-55	+61	+55	+61	+276	+301	+246	-178	-553	-669	-528	-246	-160	+215	+196	+196	+129	0	+123	+74	+123	+160	-16												
18		+190	+178	+184	+178	+184	+172	+375	+184	+12	-178	-528	-430	-295	-178	-319	+74	+276	+264	+147	-61	+68	+61	+135	+154	+35												
19		+61	+233	+49	+196	+190	+221	+160	+491	+626	0	-645	1056	-270	-479	+55	+289	+252	+479	+184	-301	+411	+332	-399	-442	+27												
20		-111	+356	+276	+190	+264	+289	+467	+553	+393	-55	-645	-884	-718	-295	-160	+196	+418	+258	+215	-239	..	..	..	..	..							
21		+356	+55	-626	-774	-295	-74	-123	+269	+460	+246	+221	+418	+356	+430	+503	+49	..											
22		-1553	+872	-178	+669	+68	-61	+424	+454	+485	-264	-792	-737	-583	+31	-55	+55	-25	+147	+301	-80	-68	0	-86	+430	-23												
23		+276	-61	+25	+289	-117	+368	+246	+620	+620	+68	-368	-117	-657	-430	-74	-61	-123	+731	+694	+792	+890	+982	+081	0	+236												
24		-669	-74	+190	+491	+98	+602	+491	+804	+442	-196	-399	-282	-497	-319	-442	+25	+92	+743	-12	-92	+12	+61	-61	-319	+29												
25		-61	-68	+252	+209	-49	+282	+503	+258	+252	+68	-362	-460	-227	-178	-111	0	+313	+203	+276	+49	+86	-31	+282	+68	+65												
26	X	-147	+215	+129	+111	+344	+276	+375	+25	+688	+160	-307	-270	-319	-160	-129	+111	+172	+129	+172	0	-25	+18	+61	+68	+71												
27	X	+80	+74	-31	+190	+123	+190	+454	+424	+313	-117	-546	-626	-663	-375	+49	+111	+196	+418	+246	+123	+172	+233	+270	-18	+54												
28	X	-18	-61	+129	+141	+129	+276	+497	+737	+479	-381	-749	-737	-786	-485	+111	+307	+332	+442	+246	+68	+61	+49	+12	+49	+35												
29	X	+129	-12	+61	+111	+123	+123	+420	+602	+307	-246	-546	-460	-491	-203	-55	+68	+123	+313	+61	-37	-55	0	+68	-37	+16												
30		+246	-43	+111	+43	+61	+92	+209	+368	+313	-55	-258	-485	-651	-215	+74	+246	+196	+178	+49	-37	0	+49	+111	+25	+26												
31		+129	-25	+49	+55	+68	+123	+442	+675	+491	+405	-583	-737	-700	-117	+86	+184	+313	+276	-74	-209	-37	+55	-55	+55	+36												
MEANS ALL DAYS		-38	+23	+45	+138	+87	+212	+352	+401	+291	-118	-459	-513	-418	-170	-26	+147	+206	+287	+177	+23	+47	+102	+95	-11	+37												
MEANS 0 DAYS		-1	+44	+38	+72	+138	+196	+354	+341	+281	-135	-463	-457	-411	-208	-21	+171	+212	+256	+128	+6	+15	+33	+36	+14	+26												

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	- 61	+141	+ 49	+110	- 37	+ 79	+189	+128	+ 67	+177	+171	+128	+183	-116	- 37	+110	-153	+122	+122	- 86	- 73	+ 67	+141	- 61	+ 69						
2	X	+122	+ 55	+ 61	+ 55	+110	0	- 31	+ 37	+ 37	-116	-336	-214	- 61	+244	+360	+379	+428	+318	+428	+128	+122	- 37	-183	- 92	+ 76						
3	X	- 79	+208	+244	+ 86	+116	+ 61	+196	+ 12	-177	-373	-257	-177	- 37	+177	+220	+434	+171	+122	+336	+299	+232	+220	+122	+ 49	+ 92						
4		+122	+110	+128	+110	+110	+ 49	- 49	+ 49	- 37	-122	+ 6	0	+ 49	+214	+ 98	+ 61	- 73	- 98	+251	+226	+275	+202	+306	+ 24	+ 84						
5		+122	- 73	- 43	+189	+ 92	- 49	+ 98	+153	+153	+171	+ 24	- 61	-122	+348	+ 86	+ 67	- 55	-153	+318	+ 61	+ 61	+ 67	+ 31	+ 98	+ 66						
6		+ 61	- 55	-116	-434	+244	+116	+422	+ 61	+452	- 31	+ 49	- 61	+ 31	+220	+403	+538	+623	+342	+ 31	+232	-293	- 61	+ 67	-617	+ 93						
7		-141	- 98	+ 92	- 61	+128	+159	+153	+434	+306	-177	-538	-122	+202	+244	+ 67	+183	+177	+ 67	- 55	- 61	- 73	0	0	- 12	+ 36						
8	X	+ 31	+ 49	+122	+165	+ 92	+122	+ 18	+147	+251	+ 79	+ 12	- 31	- 18	+ 79	+159	+220	+251	- 55	+ 61	+238	+306	+189	+ 67	+ 67	+109						
9		+ 18	+ 55	+ 67	- 31	-324	+ 92	+ 61	+397	- 37	+244	+116	- 67	- 55	+189	+360	+825	+550	+477	+293	+538	+312	+764	+134	+ 18	+208						
10	..	..	..	..	..	..	..	..	..	..	+251	+312	- 67	-116	- 61	+ 55	+196	+196	+367	+293	+189	+299	+428	+214	+ 12	..
11		- 18	-165	-153	- 55	- 55	+ 31	+ 18	+446	+428	+ 37	-281	-342	+ 31	+293	+128	+568	+409	+727	+367	-208	-238	-128	+ 61	- 31	+ 78						
12	X	+110	+110	- 61	+ 67	- 55	- 61	+116	+318	+171	+ 12	-122	-244	-110	- 61	+ 55	+189	+196	+299	+128	0	+ 61	+ 12	+ 18	+ 37	+ 49						
13		0	+ 55	+122	+189	+ 73	+128	- 37	+ 98	+183	+ 67	- 18	+ 18	- 73	- 79	+ 92	- 49	+293	-208	+ 61	+ 79	+134	+415	+721	+128	+100						
14		+128	-336	-293	+477	+ 55	+ 49	+440	+501	+ 49	-623	+110	+177	+ 98	+ 12	+257	+251	+171	+ 67	+171	-196	-177	-116	- 86	-269	+ 63						
15	X	+ 79	- 67	- 55	- 67	+110	+ 49	+110	+ 61	+244	+ 12	-226	+ 12	0	+312	- 61	+244	+177	+122	0	- 61	- 98	-116	- 55	+ 61	+ 33						
16		+ 12	+ 18	0	+ 61	- 55	0	+122	+189	- 37	- 55	+ 61	-281	-312	+110	+257	+ 61	+ 98	+ 67	- 55	+ 67	- 12	- 86	- 92	+244	+ 16						
17		- 73	- 55	-116	- 37	- 18	-177	- 55	+153	+128	- 55	-122	-208	-153	- 61	- 18	+367	+251	+171	+ 61	+ 37	- 18	- 73	- 24	+ 61	- 1						
18		+ 92	+ 67	+ 67	+ 61	+ 37	-177	- 98	+ 67	+ 49	- 61	-183	- 37	-128	-153	..	..	..	..	+428	+257	+293	+232	+299	+244	..		
19		+171	+354	+293	+238	+189	+122	-306	+360	+489	+244	- 55	-293	+660	+ 6	+244	+373	+367	+642	+312	- 79	+800	-275	- 67	-196	+191						
20		+ 24	+336	+263	+183	+ 55	+244	+422	+672	+544	+183	-128	-403	-318	- 98	- 55	+299	+306	+238	+171	..	..	..	..	..	..
21	..	..	..	..	..	..	..	..	..	+440	+391	- 49	-189	+220	+251	+306	+477	+264	+354	+358	+428	+367	+257	+678	+336	..
22		-923	+935	-226	+813	+122	-183	+269	+360	+489	- 24	-342	-379	0	+562	+ 98	0	-116	+ 12	+189	+128	0	-122	-244	+428	+ 77						
23		+312	+ 49	- 61	+244	-189	+251	+ 49	+134	+336	+ 98	-214	+428	-556	-220	+171	+110	-177	+161	+916	+825	+793	+642	+550	- 43	+231						
24		-354	-153	+147	+134	+312	+306	+293	+672	+299	-244	- 86	+269	+ 24	+ 55	-422	+ 37	+183	+635	0	-122	+ 61	-196	+214	- 55	+ 84						
25		- 18	- 61	+153	+208	+ 67	+122	+ 73	+373	+ 98	+208	- 55	- 73	+ 92	+122	+189	+232	+128	- 37	- 73	- 18	-232	-171	+415	+ 61	+ 75						
26	X	-220	+293	+189	- 12	+275	+122	+147	- 61	+354	+ 92	- 98	- 12	- 18	+110	0	+ 67	+ 92	+ 61	+ 61	- 12	- 18	- 31	+ 37	- 12	+ 59						
27	X	+ 61	+ 49	- 61	+128	0	0	+214	+354	+189	+ 49	-214	-275	-367	-196	+ 61	+122	+171	+464	+122	+ 67	+ 49	+ 61	+ 67	- 61	+ 44						
28	X	- 18	-116	+134	+ 61	+ 55	+ 79	+244	+495	+428	-110	-312	-293	-428	-214	+183	+134	+171	+312	+183	+ 92	0	+122	+ 67	+ 67	+ 56						
29	X	+110	+ 61	+ 86	+ 98	+ 67	+ 18	+208	+434	+269	- 98	-232	-177	-196	+196	+232	+122	+ 79	+165	0	+ 31	- 55	- 67	+ 37	- 49	+ 56						
30		+128	- 55	+134	0	- 18	- 92	-324	+244	+232	+244	+ 61	-116	-147	+171	+171	+128	+ 98	+ 86	+ 49	+ 12	+ 6	+ 55	+116	- 18	+ 49						
31		+183	- 18	+ 37	+ 43	+ 61	+ 55	+122	+299	+367	+440	- 67	-379	-354	-214	+128	+177	+422	+214	- 24	-141	+122	+177	- 73	+ 55	+ 68						
MEANS ALL DAYS		- 5	+ 47	+ 54	+103	+ 57	+ 54	+102	+254	+212	+ 5	-110	-103	- 61	+ 93	+129	+220	+194	+226	+158	+ 77	+ 74	+ 56	+ 87	- 4	+ 80						
MEANS 10 DAYS		+ 14	+ 78	+ 71	+ 69	+ 73	+ 47	+141	+192	+183	- 28	-161	-128	-105	+ 53	+117	+202	+189	+193	+144	+ 70	+ 53	+ 42	+ 32	+ 1	+ 64						

* = 10 LEAST DISTURBED DAYS

TABLE 189

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17°.8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+135	-18	-98	-12	+110	+184	+557	+679	-202	-177	-312	-557	-355	-312	-55	+306	+600	+661	+12	+129	+979	+673	+900	-734	+129						
2		+1536	+826	+98	-544	+184	+251	+318	-1138	+92	-55	-612	-649	-398	-177	+31	+86	+245	+275	+233	-55	-49	+80	-31	-12	+22						
3		-165	+55	+312	-37	+129	+245	+514	+514	+37	-490	-673	-649	-612	-245	-98	+343	+410	+673	+114	-190	+61	+453	-49	-122	+64						
4		-159	-624	+288	+190	+184	+330	+483	+728	+337	-361	-759	-734	-612	-490	+184	+465	+416	+196	+37	-153	-61	-37	-18	-49	-9						
5	X	-18	0	+67	+153	+129	+147	+435	+649	+398	-288	-728	-949	-563	-239	+55	+367	+588	+416	+110	-24	-153	-37	-18	0	+21						
6		0	0	+49	+49	+361	+269	+569	+630	+459	+61	-600	-1095	-991	-514	-147	+184	+61	+147	+275	0	+67	+190	+275	-37	+11						
7	X	-67	-55	-122	+171	+367	+245	+532	+808	+563	+49	-545	+239	-1034	-630	-110	+116	+343	+453	+233	0	0	+129	-184	0	+67						
8	X	-171	-122	-208	+18	+122	+184	+496	+814	+618	+67	-624	-779	-1040	-569	-129	+49	+294	+416	+196	-12	-49	0	+116	+31	-20						
9	X	+37	-37	-129	+135	+73	+80	+441	+857	+618	+165	-734	-1102	-802	-422	+18	+257	+343	+251	0	0	0	-18	-129	+61	-2						
10	X	-55	-49	-49	+61	+190	+251	+502	+734	+551	+67	-361	-838	-736	-551	-92	+122	+245	+343	+141	+18	+49	+61	+61	+49	+27						
11	X	-55	-122	-49	-55	+122	+233	+545	+887	+545	-416	-845	-857	-736	-532	-49	+159	+453	+483	+122	-12	+67	+147	+177	+135	+12						
12	X	+67	+129	+110	+147	+196	+190	+422	+490	+190	-239	-373	-398	-373	-477	+251	+239	+294	+61	+18	+122	+269	+367	+153	+177	+85						
13	X	+294	+245	+184	+135	+67	+269	+551	+692	+398	-31	-177	-214	-12	-184	-110	-245	-49	+73	+129	+67	+122	+153	+233	+12	+108						
14		+306	+98	+67	+135	+80	+110	+55	+196	+269	+110	+18	-300	-367	-459	-110	-159	+367	+190	+563	+447	+171	+245	+483	+416	+122						
15		+129	+171	+61	+37	+147	+147	+184	+398	+98	-49	-92	-171	-135	-190	-220	0	+135	+184	+122	+80	+49	+110	+61	+73	+55						
16		+86	+122	0	+171	+245	+159	+220	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19		+61	+98	+49	+55	+67	+184	+322	+649	+673	-275	-520	-373	-288	-300	-61	+12	+135	+104	0	-67	-61	-31	-18	-92	+19						
20		+31	0	+12	+61	+61	+122	+520	+955	+551	-300	-649	-661	-551	-318	-153	+177	+416	+177	+129	0	+55	+122	+306	+184	+52						
21		-122	+61	+122	+208	+190	+306	+490	+447	+306	-153	-428	-477	-312	-239	-343	+122	+61	+122	+55	-49	-343	+1469	+1310	+624	+143						
22		+184	+1334	-153	+416	-330	-551	+588	+575	+73	-416	-814	-765	-557	-612	-373	-245	-55	+269	+233	-147	+31	+61	+86	+92	-45						
23	X	+61	+55	+98	+98	+171	+233	+300	+355	+190	-147	-490	-679	-741	-551	-49	+86	+361	+367	+135	+61	+92	+49	+122	+196	+16						
24		+245	+122	+61	+61	+98	+239	+502	+734	+490	-208	-661	-734	-673	-477	-55	+269	+337	+184	-67	-37	+49	+61	-37	-37	+19						
25		-73	0	+31	+61	+98	+141	+416	+692	+330	-18	-428	-699	-710	-367	-202	0	+61	+428	+110	-55	+171	+61	+49	0	+4						
26		-12	+110	+49	-61	+110	+245	+551	+202	+116	-67	-318	-233	-190	-110	-61	+98	+135	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	..	+355	-741	-722	-496	-214	-300	+92	+98	+184	+251	+104	0	-12	-37	+190	+61	..
28		+24	-239	-324	-61	-330	+422	+551	+575	+416	+80	-275	-428	-404	-282	-300	-177	-110	+245	+490	+355	+349	-67	+98	-61	+23						
29		-12	-31	-294	+171	+49	+171	+330	+435	+306	+141	-184	-245	-177	-214	-153	0	+55	+135	+122	-61	+67	+73	+98	+177	+40						
30		+110	-18	0	+55	+37	+122	+343	+581	+153	-361	-673	-612	-306	0	+153	+300	+367	+282	+135	+61	+135	+98	+67	+61	+45						
31	X	+98	+110	0	0	+214	+73	+483	+802	+282	-153	-318	-373	-306	-196	-61	+49	-98	-129	-171	-177	-18	0	-12	-49	+2						
MEANS ALL DAYS		+93	+77	+7	+66	+107	+177	+445	+567	+336	-131	-495	-588	-535	-267	-84	+111	+241	+269	+172	+12	+79	+170	+158	+42	+39						
MEANS 10 DAYS		+19	+15	-10	+86	+165	+190	+471	+709	+435	-93	-520	-615	-646	-435	-28	+120	+277	+273	+91	+4	+38	+85	+52	+61	+31						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT					EASTWARD		LINE		OW		LENGTH IN KMS					93.9					DIRECTION					E. 0° 5' N.				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1		-170	-18	-97	0	+195	+128	+329	+609	-55	+146	+177	-189	-207	-67	-122	+250	+463	+786	+97	-116	+889	+1035	+591	-250	+183						
2		+1967	+676	+438	-365	+97	+73	+116	-597	-244	+91	-134	-390	-116	+128	+201	+67	+171	+207	+244	-91	+55	+61	-189	0	+103						
3		-311	+18	+438	-37	+183	+122	+158	+97	-18	-213	-274	-244	-140	+61	+189	+633	+670	+103	+840	-256	+110	+457	+18	-420	+130						
4		+97	-134	+128	+128	+79	+104	+244	+609	+304	-55	-244	-298	-244	-311	+910	+378	+244	+146	+171	-55	+30	+18	+49	0	+92						
5	X	+24	+18	+18	+128	+18	-55	+122	+426	+384	+67	-122	-371	-55	+24	+85	+256	+432	+195	-55	0	-189	-55	-18	-37	+52						
6		-122	+128	+73	-12	+244	+18	+122	+487	+457	+365	-37	-505	-609	-262	+49	+426	+365	+116	+250	0	+61	+128	-18	+183	+79						
7	X	+134	+61	-73	+219	+268	+128	+195	+475	+451	+256	0	-311	-603	-317	+49	+122	+183	+252	+61	+49	-61	+122	-67	+18	+63						
8	X	0	-55	-110	+73	+61	+18	+116	+384	+371	+140	-91	-359	-414	-183	-67	-24	+158	+231	+152	+61	+30	+61	+128	+67	+831						
9	X	+67	-43	-55	+128	+55	-73	+85	+609	+554	+311	-195	-664	-475	-171	+91	+244	+304	+207	+250	+250	+110	0	+128	+268	+83						
10	X	+122	+55	-12	+55	+110	+30	+171	+475	+609	+359	+12	-426	-317	-304	-134	-97	+116	+268	+110	-36	+30	+49	+73	+110	+60						
11	X	-18	-116	-61	-55	+24	0	+244	+609	+518	-67	-195	-341	-365	-244	-55	+104	+183	+110	+61	-67	+55	+128	+49	+110	+25						
12	X	+18	+67	-55	+49	+67	-37	+110	+304	+207	-67	-12	-91	-122	-420	+61	+79	+67	+122	+61	+61	+128	+365	+128	+61	+48						
13	X	+177	+116	+128	+49	0	+61	+231	+414	+341	+49	-61	-43	+268	0	-61	-292	-73	-55	-85	0	-24	+61	+146	-91	+52						
14		+128	+73	+85	+79	-37	-18	-73	+49	+18	+73	+146	-43	-18	-177	-61	-177	+213	-30	+438	+286	+67	+207	+6	+499	+72						
15		+67	+91	-55	-61	+55	-12	-55	+128	+61	+55	+122	+128	+110	+61	-116	+67	+499	+146	-61	-91	-73	0	0	-37	+43						
16		+12	+49	-61	+30	+171	+18	-61	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	-12	0	-55	+85	+61	-91	-104	..	..	..	..	+365	+158	+177	+189	..
19		+171	+128	+79	+128	+128	+189	+256	+493	+731	+140	-97	+67	+134	+91	+207	+79	+152	+183	+189	+311	+244	+183	+250	+219	+194						
20		+85	+61	+128	+79	+97	+85	+244	+664	+469	+67	-122	-61	+43	+61	-73	+67	+128	+780	-396	+61	..	..	..	..	..	
21		..	..	..	..	..	..	..	..	..	+110	-12	-67	-73	0	-85	-256	+49	+37	+12	-79	-341	+1255	+987	+889	..
22		+219	+2058	+1242	+1285	+201	-256	+706	+256	+85	+49	-195	-244	-146	-396	-177	-189	-213	+49	+61	-195	+24	+49	+85	+85	+185						
23	X	+55	0	+37	-12	+67	+116	+171	+304	+317	+171	-171	-341	-426	-311	0	+37	+256	+304	+231	+183	+171	+67	+152	+134	+63						
24		+183	+189	+158	+122	+183	+250	+396	+682	+646	+164	-128	-292	-365	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	..	+365	+317	+335	+97	-177	-402	-128	-183	-55	-37	+49	+189	+171	+304	+231	+134	+67
26		+61	+231	+12	-110	+91	+183	+311	-61	0	+67	+177	+298	+183	+110	+110	+152	+73	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	..	+475	-189	-445	-110	+256	0	+183	..	..	..	..	..	..	..	..	..	..
28		..	..	..	..	..	..	..	..	+365	+432	+365	-55	-146	-158	+61	+73	+85	+67	+146	-134	+365	-280	+256	-61	..
29		-43	-55	-262	+250	+61	+122	+171	+298	+250	+183	0	-43	+97	+128	+91	+30	-12	+61	+97	-91	+91	+97	+110	+128	-73						
30		+61	0	+12	+12	0	+37	+177	+378	+244	0	-268	-317	+128	+755	+725	+171	+244	+213	+122	+79	+171	+128	+79	+67	+134						
31	X	+122	+91	+61	+49	+304	+67	+317	+493	+304	+122	+67	-30	-116	-61	+43	+128	-12	+37	-55	0	+61	+55	+55	0	+88						
MEANS ALL DAYS		+132	+150	+93	+100	+104	+36	+186	+348	+280	+104	-75	-241	-173	-94	+86	+109	+210	+218	+151	+9	+94	+153	+84	+53	+88						
MEANS 0 DAYS		+70	+19	-12	+68	+97	+86	+176	+444	+406	+134	-77	-298	-262	-199	+1	+56	+161	+167	+73	+40	+31	+85	+77	+64	+56						

* = 10 LEAST DISTURBED DAYS

TABLE 191

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1937
 EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

SEPTEMBER 1937
 MEAN TIME

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+ 55	+342	+146	+140	+183	+244	+732	+1135	+128	-159	-775	-677	-500	-30	-85	+268	+152	+342	+55	0	0	0	-12	+12	+71
2	X	+ 67	+ 61	+122	+110	+116	+232	+543	+854	+110	-305	-476	-433	-427	-305	-110	+116	+79	+61	-12	-12	-30	-67	+12	0	+13
3	X	0	-214	-171	+311	+183	+238	+561	+903	+342	-177	-403	-610	-683	-549	-317	-18	+122	+122	-183	-61	+152	+189	+549	-61	+9
4		-116	-61	+12	0	+61	+122	+421	+549	+336	-37	-366	-396	-458	-317	-122	+61	+152	+92	+433	+61	-116	-146	-171	+61	+2
5	X	-183	-55	+18	-67	-220	+177	+549	+805	+665	+128	-305	-610	-722	-561	-305	0	+85	+61	+177	+244	-73	+85	-55	+12	-7
6		..	..	..	..	..	..	..	+689	+598	+244	-317	-610	-793	-671	-85	-12	+183	+201	-61	+171	-92	+12	+61	+18	..
7	X	+ 92	+ 37	+ 98	+195	0	+61	+488	+702	+61	-134	-433	-622	-610	-384	-293	+61	+79	+177	-37	+18	0	+61	+24	0	-15
8		+ 37	+12	-18	+116	+49	+122	+464	+921	+311	+30	-177	-394	-799	-689	-366	0	+146	+152	+37	+24	+171	-55	-73	-61	-1
9	X	+ 30	-12	+49	+55	0	+189	+610	+1049	+573	-299	-732	-854	-726	-482	0	+214	+152	0	-12	+55	+110	+49	-61	-49	-4
10		-30	-24	0	+55	+67	+189	+531	+854	+451	-195	-622	-1006	-793	-458	-561	+732	+543	+634	+848	+1324	+1019	-354	+543	+451	+175
11		-317	-122	-85	-159	-439	+580	+799	+793	+317	-128	-396	-317	-244	-37	+183	+122	+183	+293	+159	+79	+49	+18	+110	+67	+63
12		+67	+12	+134	+30	+146	+195	+476	+537	+439	-232	-476	-396	-293	-30	+189	+134	+260	+85	+171	-116	-12	-116	..	..	..
13		..	..	..	..	..	..	..	+305	+183	+18	-12	-244	-317	-238	+67	+110	+61	+134	+18	+12	-61	+61	+427	+317	..
14		-183	+128	+398	-549	+366	+183	+561	+634	+427	-104	-433	-329	-92	-55	+134	+268	+171	+67	-159	0	0	+73	+171	+98	+82
15		0	-37	-73	-293	+561	+244	+445	+543	+152	-566	-543	-354	-146	+12	+214	+61	-128	-238	-128	-49	-24	-49	-122	+189	-10
16		-92	+561	+128	-85	+61	0	+329	+421	+299	+37	-128	-256	-342	-171	+37	+378	-55	0	+85	+183	+61	-24	+201	+244	+78
17		-61	0	+122	+98	+116	+238	+622	+512	+122	-146	-366	-439	-543	-586	-12	-55	+61	+73	+49	+488	-24	-73	-110	-61	+1
18		0	-18	0	+61	+61	+158	+494	+671	+415	-152	-647	-488	-488	-189	+311	+232	+445	+305	-299	-110	+61	-183	-67	-55	+22
19	X	-12	0	+49	+61	+116	+116	+61	+354	+232	-18	-183	-500	-512	-250	-37	+195	+183	0	-30	0	-12	-55	-49	-37	-14
20		-12	+12	+67	+79	+67	+171	+415	+628	+372	-49	-415	-610	-640	-372	-49	+171	+366	+342	-55	-79	+55	+18	-49	+55	+20
21	X	-30	-12	-24	0	+67	+171	+396	+610	+311	-238	-396	-390	-427	-451	+55	+427	+189	0	-61	+49	+30	+79	+61	+12	+18
22		-85	+110	-24	+122	+116	-18	+525	+769	+598	+55	-29	-640	-488	-268	+67	+61	-37	+18	+195	+146	-73	0	+37	+30	+38
23		+49	-49	+37	-110	+171	+98	+476	+439	+433	-183	-250	-378	-476	-232	-61	+250	+61	+171	+268	+250	+73	+311	+152	-305	+50
24		+67	-177	-55	-299	-30	0	+311	+543	+366	+274	-116	-214	-421	-421	-329	-329	-18	-67	-61	+146	+55	-49	-12	0	-35
25	X	-55	-49	0	-37	+30	+67	+293	+293	+159	+67	-61	-262	-366	-128	-49	-73	-55	-12	+73	+55	-55	+12	+61	+116	+1
26	X	+427	+61	-169	-177	-128	+183	+348	+714	+140	0	-183	-372	-396	-189	-92	+43	+110	-12	+110	-183	-30	+55	+195	+433	+36
27		+43	0	0	-122	+79	+116	+299	+37	+250	-49	-128	-274	-238	-116	-73	-37	-12	-55	-61	+55	+92	0	+49	+152	0
28		-37	+232	+220	-12	+110	+30	+415	+232	+293	+116	-250	-415	-244	-171	0	+128	+183	-61	-30	0	-73	0	-12	+61	+27
29	X	+61	+49	+61	+85	+73	+183	+518	+488	+305	+96	-244	-518	-500	-55	+189	+244	+73	-61	-67	+61	+61	+12	+61	+52	+52
30		+73	+110	+110	+134	+122	+134	+500	+268	+384	+1513	-360	-159	+49	+580	+671	+586	+354	+274	-183	-299	-92	+152	+708	+805	+263
MEANS																										
ALL DAYS		- 8	+33	+44	-11	+73	+154	+471	+619	+317	-16	-359	-463	-453	-255	-37	+152	+133	+99	+41	+91	+51	+4	+77	+83	+35
MEANS																										
10 DAYS		+40	-13	+1	+54	+24	+162	+437	+677	+299	-88	-342	-517	-538	-335	-96	+121	+102	+34	-4	+22	+15	+47	+75	+49	+9

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1937

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

SEPTEMBER 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LINE	OW	LENGTH IN KMS										93.9	DIRECTION										E 0° 5' N	MEAN
		EASTWARD					WESTWARD							93.9					E 0° 5' N																	
1		+ 12	+253	+ 99	+117	+154	+185	+433	+834	+340	- 12	-179	-210	-185	+124	+315	+525	+192	+426	+185	+ 62	+124	+117	- 62	0	+160										
2	X	+111	+ 62	+198	+241	+297	+315	+377	+630	+253	+124	+ 80	+ 68	+ 62	+ 68	- 12	+124	- 37	+ 62	+ 37	+ 68	+ 62	+ 12	+111	+ 68	+141										
3	X	0	-117	-185	+192	+124	+161	+334	+630	+377	+130	+ 68	-154	-309	-297	-247	- 62	+ 62	+111	-173	- 62	+154	+229	+624	+130	+ 72										
4		- 31	- 62	+ 62	0	+ 49	+ 49	+204	+451	+408	+241	- 31	- 74	- 37	-154	- 49	+ 62	+ 99	+ 80	+630	+192	-185	-117	- 31	+179	+ 91										
5	X	-247	- 68	+ 80	- 74	- 68	+ 62	+260	+606	+680	+445	+117	-154	-303	-402	-247	0	+247	+124	+ 12	+ 87	- 19	+124	- 56	+ 12	+ 51										
6		..	..	..	..	..	..	..	+587	+606	+624	+124	-179	-371	+179	+ 19	- 62	+ 12	+ 43	- 93	+ 93	- 93	+ 12	+124	+ 62	..			
7	X	+161	+ 49	+222	+272	+ 19	- 56	+247	+433	+130	+124	- 56	-222	-185	0	-185	+ 31	+ 12	+235	+ 87	+111	+ 74	+124	+ 99	+ 68	+ 75										
8		+185	+124	+117	+241	+173	+192	+358	+748	+525	+253	+124	+ 93	-198	-253	-154	+ 37	+ 19	+ 74	+111	+ 80	+247	- 99	+ 43	0	+127										
9	X	+ 68	+ 19	+ 68	+124	+ 25	+130	+321	+754	+655	+192	-148	-371	-371	-185	+148	+130	+ 62	+ 80	+130	+ 68	+124	+235	+ 31	+ 49	+ 97										
10		0	- 55	+ 68	+ 12	+124	+117	+303	+630	+451	+198	-130	-562	- 93	- 80	-507	+847	+655	+766	+434	+1100	+396	- 62	+383	+321	+263										
11		-365	-241	- 62	-198	-426	-235	+346	+556	+482	+ 80	-154	-130	- 56	+130	+179	0	+ 56	+117	- 12	- 12	+ 12	+ 49	+111	+136	+ 35										
12		+ 99	+ 74	+ 80	- 25	+ 74	+ 99	+198	+377	+433	- 49	-247	-204	- 68	+111	+185	+ 62	+130	0	- 56	-173	+ 37	+173	..	..	..							
13		..	..	..	..	..	..	..	+185	+315	+297	+185	0	- 49	0	+ 62	- 43	- 68	+130	+130	- 19	-154	+358	+272	+377	..			
14		-167	- 68	+433	-457	+192	0	+321	+420	+501	+ 68	-117	-179	+ 56	+ 74	+222	+315	+173	+148	-124	+ 68	+117	+ 99	+ 74	+111	+ 95										
15		- 56	- 68	-124	-278	+334	+192	+192	+439	+253	+ 43	-124	- 56	- 68	- 56	+ 37	- 31	-124	- 93	-124	- 62	- 56	- 68	-124	+278	+ 11										
16		-260	+581	+ 56	-148	+ 25	- 62	+185	+383	+377	+383	+247	+ 25	-371	-247	- 56	+161	-235	- 68	+ 99	+247	+253	-433	+482	+247	+ 78										
17		-173	-117	0	- 56	- 37	+ 56	+321	+587	+346	+124	+ 49	- 49	-241	-587	- 43	-154	+ 37	+136	+ 93	+389	+136	+ 31	- 68	- 12	+ 32										
18		- 12	- 62	- 37	+ 19	+ 49	+117	+297	+618	+612	+402	+ 93	0	-371	- 49	+396	+ 87	+253	- 12	-321	- 87	+ 19	-124	- 62	- 49	+ 74										
19	X	- 37	0	+ 56	+ 68	+ 80	+111	+185	+192	+185	+136	+ 99	- 62	- 62	-136	-173	- 12	- 12	- 56	- 68	- 49	0	- 37	0	0	+ 17										
20		0	0	+ 62	+ 74	+ 68	+179	+309	+581	+494	+334	+ 31	- 49	-260	-222	-130	+130	+365	+278	+272	+ 12	+204	- 56	- 56	+ 56	+112										
21	X	- 12	+ 19	0	+ 25	+117	+154	+309	+488	+433	+179	- 37	- 99	-334	-377	- 49	+ 56	- 49	+ 62	- 25	+ 62	+ 12	+136	+154	+148	+ 57										
22		- 56	+124	+ 12	+167	+161	+ 62	+365	+606	+692	+396	+179	-192	-222	- 62	+142	- 31	- 74	0	+235	+272	+ 31	+136	+198	+315	+144										
23		+297	+198	+136	+ 49	+253	+210	+389	+383	+494	+303	+179	+ 99	- 49	+ 80	+148	+148	+124	+321	+488	+247	-451	+531	+346	-105	+201										
24		-235	-124	- 31	-179	+ 62	+ 19	+179	+371	+346	+433	+303	+198	+ 62	- 68	-185	-309	- 74	-117	- 93	+ 49	- 80	+ 62	+ 37	+ 87	+ 30										
25	X	- 12	0	+ 49	- 49	- 12	+ 25	+117	+185	+161	+192	+173	+124	+ 56	+117	- 49	- 74	- 56	- 12	+130	+ 68	- 37	+ 56	+ 80	+173	+ 59										
26	X	+192	+278	-124	- 80	- 56	+130	+173	+556	+445	+130	+ 68	- 62	- 93	- 68	- 56	- 49	+ 68	- 37	+ 68	-161	- 37	+ 62	+124	+192	+ 69										
27		+247	+ 99	+ 31	-117	+ 80	+ 74	+179	+247	+253	+ 80	0	- 25	+192	+ 19	- 68	- 93	- 68	+ 49	+ 31	+ 62	+ 62	+ 49	+ 74	+148	+ 67										
28		-117	+130	+222	- 49	+111	- 49	+303	+371	+383	+241	- 62	-185	- 49	-142	- 49	0	+ 99	+ 62	- 68	- 93	- 25	+ 37	- 19	+ 56	+ 46										
29	X	+ 19	0	0	+ 19	+ 49	+117	+315	+433	+383	+315	+ 19	+241	- 56	- 62	- 25	+ 12	+ 99	+ 68	- 31	+ 68	+173	+185	+179	+185	+ 93										
30		+222	+222	+192	+179	+111	+ 56	+ 49	+309	+222	+1594	+309	+476	+674	+989	+742	+624	+661	+445	-315	-420	- 99	+222	+791	+667	+372										
MEANS ALL DAYS		- 10	+ 44	+ 59	+ 4	+ 76	+103	+273	+498	+403	+264	+ 41	- 74	-104	- 68	+ 2	+ 92	+ 95	+120	+100	+ 88	+ 45	+ 56	+128	+128	+ 98										
MEANS 10 DAYS		+ 24	+ 24	+ 36	+ 74	+ 58	+115	+264	+491	+370	+197	+ 38	-117	-160	-134	- 90	+ 16	+ 40	+ 64	+ 17	+ 26	+ 51	+113	+135	+102	+ 73										

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 193

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1937
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
OCTOBER 1937

		COMPONENT										LENGTH IN KMS										DIRECTION N 17° .8 E									
		NORTHERLY					LINE					OM					58.4														
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	- 98	-183	-201	- 37	-256	- 37	+421	+598	+281	- 61	-152	-659	-305	-281	+ 61	+183	+293	-122	-238	- 24	-134	- 98	- 37	-396	- 62					
2	X	+396	+244	-122	- 30	+ 67	+ 92	+378	+415	+238	- 12	-311	-439	-421	-293	- 24	+110	+ 61	- 73	+ 18	+183	-49	- 67	+ 73	+177	+ 25					
3		+201	- 12	- 98	-183	-390	+ 61	+500	-152	- 61	+537	+ 67	-250	+152	-183	-244	+214	-390	+671	+366	+799	+1614	+421	+476	+1037	+216					
4		0	-323	- 55	-110	-189	+ 24	+110	+128	+323	+ 85	-293	-439	-207	-171	- 37	+207	+183	- 12	- 61	- 61	- 61	- 55	-116	- 12	- 48					
5		- 37	+ 12	- 49	+ 18	+ 55	+189	+464	+214	+293	+110	-183	-561	-543	-372	-256	+ 67	-171	- 12	+ 61	+ 98	+ 79	+ 73	- 30	- 30	- 21					
6		- 49	- 43	-293	+110	- 73	+177	+311	+439	+394	+ 37	-244	-311	-421	-311	-177	- 24	- 67	+183	-49	+189	- 61	+ 49	+171	+ 67	0					
7		+165	+146	-110	- 49	-256	-220	+189	+220	- 67	-110	+ 79	+ 85	+122	+122	- 73	+470	-305	+ 55	+506	+903	+488	+208	+233	+122	+166					
8		-427	- 37	-299	-293	-317	- 37	+128	+ 6	+214	+110	-549	-403	-250	- 49	+ 24	+110	- 55	+ 49	+ 24	- 55	- 37	- 85	- 55	- 67	- 98					
9		-116	-122	0	-317	+ 55	-622	-305	-274	-177	+671	+573	+317	+549	+244	+342	+427	+ 49	+ 55	+128	+159	-214	+396	- 55	+726	+104					
10		+1403	+311	+153	- 30	-671	+220	+586	+384	+122	-122	-250	-220	-177	-171	+152	-159	-122	-366	-171	-171	+122	+110	+115	-195	- 6					
11		+ 55	-201	-268	+ 1	- 61	-146	-152	-366	-207	+152	+415	+165	+683	-122	- 73	-177	- 61	+ 24	+ 55	0	+ 12	- 55	-116	+ 43	- 14					
12		+ 61	-159	+433	+ 98	+ 55	+ 61	+232	+329	+427	+ 92	-128	-500	-830	-195	-128	-268	+195	- 73	+ 73	+ 30	+ 55	+ 73	- 98	+110	- 2					
13		-555	-232	+183	- 49	+ 49	+128	+366	+250	+183	- 55	0	+ 73	-232	-183	-195	-183	-122	- 98	- 55	-171	+702	- 24	+ 98	+ 49	- 3					
14	X	-207	-183	+262	- 61	+ 24	- 30	+183	+366	+336	+ 61	-244	-378	-268	-293	-189	-152	-152	-61	-67	- 37	+ 12	+ 37	- 37	+177	-39					
15		-293	+220	+427	-183	+372	-336	+610	- 49	+ 98	+ 18	-152	-177	-268	- 12	+ 67	+110	- 92	- 55	- 55	- 98	- 61	- 67	- 55	0	- 1					
16	X	+ 55	-159	+262	+ 61	-244	+128	+354	+622	+366	- 67	-305	-384	-177	- 55	+ 12	- 85	- 61	-165	- 55	- 49	+ 55	- 12	+ 12	- 61	+ 2					
17		+ 61	- 73	+ 12	+ 49	+ 85	+ 73	+250	+464	+427	+ 30	-299	-372	-366	-195	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	+372	+305	+ 18	-183	-427	-366	-293	- 49	-189	- 12	- 73	- 49	+ 12	+ 61	+ 18	0	+ 12	..
19		- 18	0	+ 49	+ 24	+ 67	+ 67	+342	+549	+610	+ 85	-244	-238	-488	-305	-305	- 55	- 49	+ 24	+ 55	+ 55	- 55	- 61	- 73	- 55	- 1					
20		- 61	- 49	- 49	- 55	0	+122	+256	+476	+244	- 12	- 98	-293	-366	-183	-128	-122	-146	- 55	- 55	- 37	0	+ 18	+ 55	+ 24	- 21					
21	X	0	-128	- 67	+ 85	-293	+146	+372	+384	+427	-409	-183	-244	-183	+ 49	+ 30	- 30	+ 67	0	+122	+ 49	+ 37	+ 98	+ 98	+238	+ 28					
22		0	- 43	-177	-293	-281	-128	- 12	+506	+330	+177	- 37	-183	-232	-287	+384	-220	- 55	+ 24	+695	- 67	-146	+ 85	+ 49	- 12	+ 2					
23		- 61	-421	+110	- 49	- 85	+146	-110	+762	+451	+ 61	-305	-159	- 98	-152	+305	+372	+518	+458	+ 24	-146	-152	- 61	-122	- 67	+ 51					
24		-201	- 55	-769	+683	-122	-500	+ 98	+640	+256	-518	-177	-122	-104	+ 85	0	-146	+ 49	+372	+311	-195	- 49	+ 37	0	-122	- 23					
25		+128	-189	+ 24	+110	- 49	-183	+ 92	+317	+336	+232	- 24	-366	-299	- 61	-177	0	-110	- 67	+183	+427	+281	- 30	-159	+354	+ 32					
26		+366	+171	-689	-415	- 12	-366	+ 61	+677	+128	+214	- 67	-384	-183	- 73	+274	- 61	0	0	- 61	+214	- 61	+ 73	0	-171	- 15					
27	X	-146	- 67	+ 49	-116	-360	- 98	+171	+824	+403	+ 73	+ 49	-207	-403	- 67	+ 12	+110	+ 37	- 98	+189	-177	- 61	0	- 67	-183	- 6					
28	X	+293	- 12	- 61	-122	0	+ 67	+256	+409	+348	- 37	-299	-593	-494	+ 67	- 49	+122	- 12	0	+ 67	+ 92	-122	- 24	+ 85	- 37	- 3					
29	X	-348	0	- 55	+ 49	+ 18	+ 98	+305	+390	+ 37	- 30	-293	-366	-366	-146	- 49	- 49	+183	+116	+ 6	+ 12	- 12	0	- 55	- 61	- 26					
30	X	- 92	- 55	- 73	+ 18	+ 79	+122	+305	+409	+177	+ 49	- 49	-183	-311	-323	-268	- 30	- 55	+ 61	+152	- 49	+ 12	+ 67	0	+ 49	0					
31	X	- 18	+ 55	-189	- 55	+171	+152	+152	+647	+488	+ 55	-311	-549	-555	-421	-183	+ 67	+116	+122	+ 49	0	- 30	- 18	- 24	- 49	- 14					
MEANS		+14	-52	-103	-39	-91	-24	+230	+349	+243	+48	-128	-275	-230	-143	-31	+28	- 9	+33	+76	+65	+75	+72	+22	+57	+ 8					
ALL DAYS																															
MEANS		-16	-49	-20	-21	-79	+64	+290	+506	+310	-38	-210	-401	-348	-176	-65	+25	+48	-22	+24	0	-32	- 2	+ 5	-15	- 9					
10 DAYS																															

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1937

OCTOBER 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		EASTWARD					LINE					OW					93.9					E 0.5 N										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	+ 37	-451	-154	+ 49	+ 37	+ 68	+340	+426	+433	+464	+624	-216	- 56	-445	- 87	+216	+334	- 62	-309	0	-136	- 25	+ 68	-315	+ 35						
2	X	+241	+247	- 68	- 49	+ 68	+ 68	+235	+315	+278	+185	- 25	- 87	-136	-179	-111	- 62	- 37	- 12	+ 80	+185	+ 99	- 49	+117	+185	+ 62						
3		+235	0	- 56	- 62	-371	-315	+674	+ 68	-105	+ 80	+488	+340	+649	-117	-210	+ 31	-297	+224	+1020	+457	+1477	+760	-260	+2138	+357						
4		- 87	-216	- 99	-148	-154	0	- 99	+ 62	+192	+124	-124	-198	+ 80	- 56	-117	+198	+192	+130	- 49	- 99	- 62	- 49	-105	- 25	- 30						
5		- 31	+ 49	- 62	- 25	+ 25	+117	+247	+185	+173	+124	+117	- 62	-136	-179	-179	+ 12	-253	- 62	+ 62	+148	+ 56	+ 87	- 49	+ 56	+ 13						
6		- 56	- 31	-284	+ 87	- 49	- 31	+130	+334	+426	+278	+130	+ 87	- 74	-117	-130	- 37	-173	+136	- 74	+ 56	+ 37	- 56	+ 80	+ 33	+ 32						
7		- 62	+260	- 56	- 56	- 74	-321	+ 37	+192	- 62	+142	+297	+464	+711	+247	0	+735	-340	+216	+550	+927	+964	+216	+519	+ 74	+232						
8		-674	+ 99	- 74	-179	-303	-124	-111	- 99	+148	+593	-377	-235	+ 12	+136	+117	+161	0	+ 62	+ 18	- 62	- 37	- 62	+ 49	- 37	- 41						
9		-321	- 87	+111	-464	+204	+117	-216	+105	-612	+229	+445	+717	+816	+396	+433	+426	+396	- 37	+ 62	+ 68	-408	+457	+ 62	+111	+125						
10		+1397	+340	-933	-130	-105	+198	+371	+358	+117	+124	+148	+192	+154	- 49	+ 87	- 49	-130	-494	-284	-272	+278	+124	+ 99	+ 43	+ 66						
11		+117	-179	-297	+309	- 62	-130	-117	+179	-476	+124	+1020	+742	+1607	+185	+ 74	+148	+346	+402	+538	+556	+630	+618	+556	+587	+312						
12		+501	+154	+816	+266	+494	+457	+358	+680	+630	+470	+173	+ 49	- 99	+723	+593	-185	+587	- 87	+ 68	+ 25	- 12	+124	- 19	+433	+300						
13		-124	+154	+340	+173	+124	+445	+408	+649	+253	+ 62	+241	+371	+124	+ 68	- 74	-124	+ 12	+ 12	- 56	-105	+216	+630	+383	+ 12	+175						
14	X	- 37	- 74	+358	- 12	+315	+185	+297	+315	+365	+198	+ 49	+ 37	+ 87	-117	-124	-117	- 12	+ 49	- 74	+ 62	+124	+173	+179	+260	+104						
15		+ 25	+ 98	+235	- 80	+970	+117	+791	+426	+297	+501	+297	+297	+ 62	+ 37	+111	+192	+ 74	- 37	- 74	- 74	- 12	+ 68	+ 87	+ 74	+187						
16	X	- 74	- 62	+346	+136	- 49	+124	+284	+507	+624	+350	- 12	- 68	- 74	+ 56	+ 43	+ 19	- 62	-130	- 62	+ 68	+117	+ 49	+117	- 12	+ 93						
17		+ 62	- 68	+ 49	+124	+154	+185	+309	+334	+488	+334	+130	0	- 87	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	+247	+247	+192	+148	- 12	- 56	- 68	+ 68	-130	- 37	-117	- 62	- 19	+ 74	+ 62	+ 49	+ 56	..
19		+ 12	+ 37	+130	0	+ 68	+192	+260	+426	+569	+321	+117	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	..	..	+371	+383	+303	+173	0	+ 31	- 19	- 49	- 93	- 43	- 62	0	+ 68	+111	+173	+148	..
21	X	+ 19	+ 37	- 49	+124	-167	+111	+352	+303	+494	+154	+124	+ 37	+ 74	+297	+ 99	+ 99	+124	- 62	+ 49	+ 49	+ 87	+130	+124	+315	+122						
22		+ 62	- 68	-130	-179	-241	-173	+ 93	+371	+173	+247	+185	+278	+ 74	+124	+649	- 99	0	+284	+328	+130	- 12	- 74	+105	+124	+ 94						
23		0	-464	+185	- 93	+ 74	+272	+ 93	+470	+365	+340	+210	+ 37	+ 12	+210	+470	+674	+748	+779	-154	-433	-192	0	-124	-130	+140						
24		-278	+ 12	-754	+587	-185	- 99	-148	+377	+655	- 56	-130	+ 93	+247	+278	+ 31	-241	- 62	+185	+198	-173	- 12	+ 31	-154	0	+ 17						
25		+ 68	- 93	+ 74	+ 62	- 56	+154	+ 19	+124	+321	+340	+148	- 25	- 37	+ 62	-173	- 56	-130	0	+117	+482	+402	+192	-130	-247	+ 67						
26		+519	+117	-680	- 56	+124	- 68	- 25	+278	+266	+309	+253	-148	+ 12	0	+315	- 62	+ 49	- 12	- 80	-124	0	- 74	+161	- 62	+ 42						
27	X	-124	-235	- 62	-735	- 62	-142	+402	+643	+494	+142	+192	+179	- 43	- 37	- 25	+ 87	-185	-173	+ 62	-216	- 56	+ 68	-148	- 87	- 3						
28	X	+185	- 25	- 56	- 99	0	+ 56	+235	+260	+426	+ 62	+192	-173	-179	+408	+272	- 56	- 62	- 12	+ 49	- 31	-241	+124	+111	+ 62	+ 63						
29	X	-260	- 62	- 93	+ 25	0	+ 68	+185	+358	+117	+ 68	+117	+ 19	- 80	+ 19	-12	-117	+111	+ 49	- 56	- 12	+ 49	+ 31	0	- 56	+ 20						
30	X	-124	+ 12	-117	+ 49	+ 74	+173	+247	+334	+247	+185	+161	+ 68	- 74	-111	- 93	- 12	- 74	+ 68	+ 49	-111	+ 49	+ 31	0	+ 62	+ 46						
31	X	0	+ 56	-130	- 68	+ 68	+154	+ 68	+426	+433	+303	+ 74	-185	-253	-179	-173	0	+ 31	+ 68	0	0	+ 37	+ 56	+ 37	0	+ 34						
MEANS ALL DAYS		+ 43	- 15	- 63	- 21	+ 26	+ 55	+191	+320	+247	+255	+185	+ 97	+129	+ 61	+ 66	+ 66	+ 44	+ 92	+ 73	+ 56	+127	+133	+ 69	+131	+ 99						
MEANS 10 DAYS		- 14	- 56	- 2	- 58	+ 28	+ 86	+284	+389	+391	+212	+150	- 39	- 73	- 29	- 21	+ 6	+ 17	- 22	- 21	- 1	+ 13	+ 59	+ 60	+ 41	+ 58						

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 195
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

NOVEMBER 1937

NOVEMBER 1937

DAY	*	COMPONENT NORTH-EAST										LENGTH IN KMS										DIRECTION N 17° 15' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	- 12	- 61	+ 55	+110	+ 61	+123	+306	+441	+ 98	- 67	-239	-337	-368	-356	-184	+ 12	+ 55	+ 49	+147	+276	+213	+294	+153	+153	+ 43						
2	X	+159	-196	-178	-184	-172	- 61	+172	+233	+ 67	+ 31	- 61	-196	-276	-374	+ 98	+ 74	+245	+ 61	+ 18	0	+ 31	+ 37	+116	- 61	- 17						
3	X	-319	- 12	+123	+ 61	+ 67	+ 86	+154	+306	+ 61	0	- 25	-178	-257	-190	- 98	0	+ 74	+ 55	+ 12	- 31	+ 25	+ 61	+ 61	-123	- 2						
4	X	0	- 18	+ 12	+ 49	+ 55	- 12	+159	+417	+368	- 25	-129	-208	-283	-251	-154	- 67	+ 12	+ 93	+116	+ 86	+ 61	+ 61	+ 67	+159	+ 22						
5	X	- 92	-178	-116	- 55	0	0	+110	+313	+141	- 49	- 74	-239	-184	-190	- 55	- 67	- 12	+110	+ 55	+ 37	+ 25	+ 49	0	0	- 20						
6	X	- 67	- 61	- 67	+ 49	0	+184	+196	+429	+190	- 55	-172	-319	-362	-172	-245	+ 49	+123	+123	+ 90	+123	+ 98	+129	0	- 12	+ 10						
7		+153	+245	+159	+ 61	- 92	+ 61	+141	+437	+172	+190	-184	-154	-116	-172	-349	+276	- 55	+613	+ 67	+141	+ 61	+141	+129	+129	+ 37						
8		+ 61	+ 61	- 12	- 12	+ 18	+ 61	+190	+129	+ 61	+ 67	+ 25	-172	-135	-276	+ 37	+239	+208	+ 61	+184	+215	+ 67	+368	+ 67	+460	+ 82						
9		+135	+ 37	- 61	- 49	- 12	-466	- 61	+282	+368	+294	+ 92	+ 49	-129	-190	-184	0	- 37	+ 55	+ 18	- 55	+ 18	+ 61	+119	+ 49	+ 14						
10		- 25	0	- 18	+ 43	- 61	+ 67	+159	+221	+ 49	+ 61	-104	-178	-245	-116	- 92	0	+ 18	- 12	+123	+ 55	0	0	+123	+135	+ 8						
11		+135	+ 98	+110	-356	+196	+ 80	+141	+178	+245	0	- 25	-356	-196	-276	- 12	+172	-123	0	- 6	+300	0	+ 49	- 12	-178	+ 7						
12		0	- 37	- 31	-110	- 31	- 61	+153	+178	+ 86	+ 61	- 55	-153	-245	- 25	- 25	- 49	- 74	- 49	+ 63	0	0	+ 96	+ 49	- 12	- 12						
13	X	+ 55	- 61	-153	0	- 61	+ 37	+ 98	+135	+123	+ 86	+123	- 67	-245	-129	-116	- 49	-123	- 67	+ 12	+ 67	- 55	0	- 61	- 37	- 20						
14		- 12	- 12	+ 49	-104	+ 37	+123	+178	+251	+134	+ 37	- 61	-215	-245	-153	0	- 49	- 92	- 74	- 55	- 61	- 37	- 55	- 18	- 18	- 17						
15	X	+ 25	+ 37	- 12	0	0	+ 61	+147	+319	+159	-141	-239	-276	-153	- 25	+ 61	+ 30	- 61	- 55	+ 12	- 49	- 37	- 55	- 61	- 55	- 13						
16	X	- 37	- 55	+ 49	+ 55	+ 49	+ 67	+154	+294	+ 86	-110	-276	-411	-374	-110	+ 30	+129	+ 61	+ 98	+129	+ 74	+ 49	- 50	- 55	- 61	- 7						
17		-110	-270	+ 61	+ 61	+ 67	+ 86	+110	+129	- 55	- 61	-110	-300	- 61	+ 37	+123	+172	+245	+233	+343	+390	+159	-159	-423	+680	+ 56						
18		+ 31	+294	+ 92	-337	-319	+539	+190	-407	-190	-546	+202	-552	-380	+123	+717	+362	+398	+239	+245	+ 55	- 61	- 61	- 67	+ 37	+ 25						
19		+221	+ 61	+202	- 61	-319	-110	+190	+215	-436	+313	+221	- 98	- 98	+ 98	+129	+172	+116	- 37	+ 55	+ 30	+172	+ 25	- 98	-134	+ 33						
20		-178	-631	+282	+429	+ 49	+ 61	-447	+123	+662	0	+ 74	-184	-173	- 67	-282	- 61	+ 61	+184	+ 98	+190	+ 86	+104	- 74	- 36	+ 9						
21		-129	-313	+116	+ 25	- 92	- 61	+ 61	+362	+368	+221	+123	- 98	-460	-429	-362	- 80	+135	+129	+ 74	+257	+251	0	+ 12	-270	- 7						
22		-141	+ 80	-625	-300	+637	+184	+251	+245	+221	+668	- 67	-239	+ 6	+178	+282	0	- 55	+123	-251	- 61	+47	- 61	-456	+190	+ 42						
23		- 37	-202	- 74	+ 37	-123	- 86	+356	+159	+ 61	+ 61	+337	-245	-319	-129	+ 96	+ 25	+123	+ 25	+ 98	+ 43	-313	+110	+ 55	+ 49	+ 4						
24		-282	+460	- 67	-196	+ 61	-809	- 43	+282	+349	+300	+129	-129	- 25	- 98	-116	+ 37	+110	+ 61	- 74	- 31	0	+ 49	+ 12	-178	- 3						
25		+ 49	+110	0	- 92	- 98	+ 31	- 61	- 31	+ 98	+184	+116	- 74	-300	-239	-184	- 67	+ 92	+ 67	+ 49	+ 12	0	+ 49	+ 67	0	- 9						
26	X	- 55	- 18	- 61	+ 61	- 55	- 61	0	+110	+196	+159	0	-184	-276	-116	- 61	- 61	-173	- 61	0	- 31	- 12	- 67	- 61	- 74	- 39						
27		- 25	- 37	+ 61	0	- 67	- 12	-184	- 12	+159	+294	+233	-141	-429	+172	- 86	+313	- 12	+172	+ 61	+215	+313	-184	0	+184	+ 41						
28		-196	+294	+ 55	- 55	-644	-834	-153	- 55	-306	+123	+196	- 55	+159	+ 86	+215	+ 12	+159	+300	- 74	- 61	-178	- 12	- 49	+208	- 36						
29		-159	-129	- 55	+172	-233	-674	+215	-417	+374	+447	-135	+429	+202	- 31	-194	- 49	+110	+ 96	+ 12	+153	+ 55	- 55	+110	+251	+ 21						
30		+251	+374	+331	+ 74	-196	+110	-497	+ 67	+172	+374	-337	+ 37	+184	-116	+ 37	+257	+176	+190	+362	+411	+276	+251	+ 31	+ 61	+120						
MEANS		- 20	- 5	+ 8	- 21	- 41	- 43	+ 82	+130	+137	+ 97	- 14	-176	-193	-118	- 32	+ 59	+ 57	+ 93	+ 66	+ 93	+ 50	+ 38	- 9	+ 47	+ 14						
ALL DAYS																																
MEANS 10 DAYS		- 34	- 62	- 35	+ 15	- 6	+ 42	+156	+300	+149	- 17	-109	-242	-278	-191	- 70	+ 10	+ 20	+ 41	+ 58	+ 55	+ 50	+ 43	+ 16	- 11	- 4						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1937
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
NOVEMBER 1937
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°. 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	+ 12	- 37	+ 19	+ 50	+ 62	+ 37	+193	+348	+248	+236	+ 68	- 62	-112	-199	-124	0	0	+ 43	+180	+503	+310	+193	+174	+193	+ 97						
2	X	+130	-137	-248	-242	-130	- 75	+ 68	+180	+124	+130	+193	+186	+ 75	-348	+ 62	+ 49	+221	- 56	- 67	- 56	+ 12	+ 19	+130	- 67	+ 6						
3	X	-435	- 56	- 62	0	0	- 19	+ 87	+130	+180	+130	+199	+118	0	- 62	-124	- 75	+ 37	0	- 75	- 56	+ 50	+112	+ 93	-168	0						
4	X	+124	- 12	0	0	+ 37	+ 37	- 43	+124	+186	+193	+137	+112	- 50	-118	-130	-118	- 62	+ 68	+ 50	+ 62	+112	+112	+186	+186	+ 50						
5	X	- 62	-180	-124	- 62	- 37	- 25	+ 50	+124	+174	+124	+186	+143	+ 68	- 62	- 50	- 75	+ 81	+186	+ 93	+ 99	+112	+168	+174	+130	+ 51						
6	X	- 31	+ 31	+ 19	+ 87	- 12	+143	+186	+279	+335	+199	+186	0	- 75	- 62	-248	0	+149	+124	+112	+174	+130	+130	+118	+ 19	+ 83						
7		- 12	0	0	- 50	-118	0	+ 99	+360	+193	+236	-155	+143	+279	- 12	-298	+110	+ 37	+714	- 43	- 56	+193	+ 50	+ 62	+ 62	+ 75						
8		+ 43	+ 31	- 25	- 31	+ 31	+ 31	+118	+124	+118	+335	+422	+335	-186	-286	- 19	+124	+ 50	-124	+ 99	+ 31	- 56	+193	+205	+310	+ 78						
9		+ 25	- 12	- 62	- 50	- 81	-193	-248	+428	+ 68	+261	+404	+397	+ 62	-180	-186	- 56	+ 31	+ 62	- 62	- 75	- 31	+ 56	+ 87	+ 31	+ 28						
10		+ 12	+ 56	0	+ 12	- 37	0	+ 62	+255	0	+118	+174	+124	+ 43	- 37	- 62	+124	+ 87	- 12	+118	+ 19	+ 37	+124	+149	+174	+ 64						
11		+186	+255	- 31	-155	- 50	+149	+124	+ 75	+248	+248	+304	+ 25	+174	- 62	+217	+174	- 50	-130	+ 56	+317	- 37	- 56	- 68	-149	+ 74						
12		+ 37	0	- 50	+ 19	- 12	- 43	+112	+ 50	+112	+ 99	+310	+255	+137	+224	0	+224	+ 50	- 56	+ 93	+ 62	+124	+174	+118	+ 31	+ 86						
13	X	+ 99	+ 50	- 56	0	- 19	+ 62	+ 68	+ 75	+161	+130	+428	+248	-124	0	0	+ 12	- 62	-124	+130	+ 87	+ 87	0	+ 19	+ 58							
14		+ 50	+ 50	+ 31	0	0	+ 50	+199	+180	+286	+217	+180	+ 19	- 68	-118	0	0	+ 31	- 56	- 50	- 37	0	0	+ 31	+ 31	+ 43						
15	X	+ 56	+ 37	+ 12	- 19	- 50	+ 62	+124	+248	+217	+ 50	+118	+ 87	+ 25	0	+ 25	+ 75	+ 12	0	+ 25	0	+ 12	0	0	0	+ 46						
16	X	0	+ 12	+ 31	+ 50	+ 50	+ 62	+124	+248	+199	+186	+ 68	-124	-273	-137	- 56	+ 37	+ 56	+ 56	+ 25	+ 19	+ 62	- 75	+ 19	0	+ 27						
17		- 75	-298	0	0	- 62	- 62	- 37	+186	+ 31	+ 75	+130	+ 50	+161	+118	+137	+193	+348	+441	+484	+491	+ 31	-199	-528	+876	+104						
18		+ 37	+174	0	-168	-453	+248	+ 62	- 62	-286	-217	+652	+ 93	-248	+149	+596	+ 62	+298	+ 87	+186	+ 25	- 68	+ 12	0	+ 50	+ 51						
19		+ 68	+130	- 25	-106	-211	0	+180	+ 6	+ 75	+130	+329	+161	+ 68	+149	+ 50	+ 68	+ 93	- 62	+112	+124	+193	+186	- 62	-279	+ 57						
20		- 25	-472	- 68	+273	+255	- 62	- 12	- 37	+366	0	+130	+193	+193	+ 56	-137	- 62	- 99	+149	0	+174	-112	+248	+ 81	+ 12	+ 44						
21		-112	-193	+ 68	- 37	0	- 99	-118	+124	+317	+317	+472	+441	-211	-428	-310	-248	+130	+124	+ 93	+366	+ 68	- 25	+ 62	-186	+ 26						
22		-193	+ 99	-428	-391	+224	+342	+422	+304	+186	+894	+273	+155	+335	+248	+155	-180	-149	- 56	-410	-122	+193	-186	-373	+298	+ 69						
23		0	- 56	-124	+ 62	+130	-242	+149	+193	+ 68	+255	+745	- 50	-155	+ 62	- 87	-124	+ 62	- 50	+ 75	- 62	-373	+149	+ 56	+ 87	+ 32						
24		-242	+348	- 31	-124	+130	-664	+ 50	+124	+130	+286	+379	+118	+248	+ 56	+ 62	+118	+ 68	- 31	- 62	- 12	+ 12	+ 75	+ 56	-118	+ 41						
25		+ 31	+118	+ 50	- 19	- 31	0	-112	- 81	+ 50	+304	+304	+304	- 50	- 31	-199	- 75	+149	0	+ 56	0	+ 62	+130	+143	+ 87	+ 54						
26		+ 12	- 56	- 56	+ 62	0	0	0	+ 68	+130	+ 68	+124	+ 87	+ 50	+ 68	+ 31	- 25	-248	-199	- 31	- 37	+ 19	- 31	+ 50	+ 62	+ 6						
27		+ 56	0	+ 68	+ 12	+ 12	0	-112	- 99	+118	+267	+441	+174	-124	+342	+112	+298	- 50	+155	+124	+310	+261	- 81	- 56	+186	+101						
28		-137	- 12	- 56	+ 62	-304	-758	-193	- 50	-304	+224	+441	+224	+286	+224	+112	- 50	+174	- 25	- 62	- 75	-130	+118	+ 93	+ 12	- 8						
29		- 50	-106	-205	+112	-130	-677	+106	-236	+279	+671	+559	+360	+596	- 75	-174	-118	- 56	+ 62	+ 50	+124	+255	- 68	+155	+348	+ 74						
30		+ 75	+379	+ 87	+ 62	-385	+137	-279	- 75	+348	+714	+242	+298	+428	+242	+360	+130	+186	+211	+373	+310	+180	+217	+ 12	- 31	+176						
MEANS ALL DAYS		- 11	+ 5	- 42	- 20	- 40	- 52	+ 48	+120	+145	+229	+281	+154	+ 55	- 9	- 10	+ 20	+ 52	+ 50	+ 56	+ 92	+ 57	+ 61	+ 39	+ 74	+ 56						
MEANS 10 DAYS		- 10	- 35	- 46	- 7	- 10	+ 28	+ 86	+182	+195	+145	+171	+ 80	- 42	- 92	- 51	- 12	+ 18	+ 10	+ 44	+ 84	+ 91	+ 72	+ 84	+ 37	+ 43						

★ = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 197

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1937

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17°.8 E									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		- 73	+294	-233	-300	-379	-282	-294	+ 31	- 98	+ 98	-110	- 61	-171	-190	-153	- 12	+ 86	+159	+428	- 49	+147	+ 86	+ 24	-104	- 48					
2		-184	- 86	-245	-184	- 49	-116	- 55	+ 49	+177	+ 86	- 61	-343	-318	-214	- 12	+245	- 73	- 55	+171	+135	+ 61	- 37	-122	-177	- 59					
3		-239	-404	+190	+ 37	0	-214	+ 43	+184	+245	+251	+ 12	-294	-355	-367	-122	+ 67	+ 61	+171	+110	+122	+110	+ 67	- 55	- 31	- 17					
4		-208	-153	-441	+ 49	- 24	+ 55	+ 61	+171	+294	+190	+110	-269	-269	-190	+ 67	+135	+159	+110	+110	+129	+ 67	+ 67	+ 55	+ 98	+ 16					
5	X	+129	+ 49	- 12	0	+ 55	+ 67	+ 61	+220	+367	+ 80	+129	- 31	-263	-190	- 80	- 12	+ 55	+110	+159	+202	+330	+269	- 80	-184	+ 60					
6		-122	-135	+ 61	+110	-190	+129	+275	+171	+496	+269	+122	-282	-337	-177	- 86	-269	+129	+ 49	+122	+129	+398	+ 61	- 18	- 73	+ 35					
7		+ 12	+135	- 73	+ 49	+ 61	- 55	- 49	+410	+367	+600	-196	-612	-520	- 37	- 37	+ 67	+ 12	+171	+233	+129	+245	+ 92	+ 98	- 86	+ 42					
8	X	-159	- 98	- 49	+ 31	-177	+135	-312	+171	+428	+330	+196	-361	-282	-251	-184	-318	- 37	0	+ 55	+306	+269	- 61	-129	- 67	- 24					
9		- 61	- 31	- 61	- 61	- 61	0	+ 49	+184	+214	+245	+147	-214	-337	-110	-343	0	+129	+110	+184	+147	+110	- 24	- 31	0	+ 8					
10		- 55	+ 49	-233	0	0	+ 73	- 61	+ 49	+367	+251	+190	- 61	-337	- 92	-233	+110	- 67	- 86	+190	- 49	- 55	+ 55	+245	+349	+ 25					
11		-129	-110	- 55	+ 61	-324	- 49	+184	+147	+196	+190	+135	- 80	-153	-184	- 98	- 55	+251	+171	0	0	+ 18	0	0	+ 12	+ 5					
12	X	+ 12	+ 18	+ 18	- 55	+ 24	- 37	- 49	+ 67	+214	+214	+ 49	-239	-251	-257	- 98	- 49	+ 49	+ 12	- 55	-116	- 61	- 67	- 12	- 55	- 30					
13	X	+ 31	+110	-104	+116	- 37	- 61	+ 55	+190	+239	-147	-116	-416	-300	-110	- 67	- 49	+ 55	+ 24	0	0	0	0	+ 61	+ 12	- 21					
14	X	- 12	+ 12	- 49	- 67	- 73	- 73	- 92	+275	+367	+269	+110	-159	-306	-135	-184	-171	- 86	0	0	+ 61	+ 61	+ 18	- 18	- 86	- 14					
15	X	- 73	- 86	+ 12	+ 61	-184	+ 80	+ 55	+177	+330	+398	+110	-416	-545	-312	-153	- 73	+ 61	+110	+ 92	+122	- 18	- 86	-110	- 67	- 21					
16	X	- 86	- 73	- 18	0	+ 12	- 18	+ 49	+110	+190	+147	+ 67	-245	-312	-251	-122	- 12	+122	+ 92	+ 67	+ 37	+ 12	+ 12	+ 37	- 61	- 10					
17		- 73	- 73	- 31	+ 49	- 18	+ 24	+ 55	+110	+177	+300	+ 55	-177	-196	- 86	-122	-122	+122	+122	+122	+257	+251	+153	- 18	- 73	+ 34					
18		-122	- 18	+ 61	-282	+214	+ 55	+110	+ 49	+122	+294	+416	-502	- 55	+ 61	+343	+184	+526	+196	+147	+ 61	- 67	+ 49	+ 49	+184	+ 82					
19		-655	+294	+116	- 92	-269	+ 49	-214	+184	+416	+575	- 49	+ 67	- 37	-526	-129	0	+ 73	+214	+239	+251	+196	+355	0	-190	+ 36					
20		-190	-177	-294	+159	+129	+ 43	+122	+196	+416	+239	+502	-649	-661	-428	- 55	+ 61	+ 61	+ 49	- 24	+ 49	-214	-177	0	- 49	- 37					
21		-129	-122	- 67	- 31	- 61	- 12	+ 61	+288	+428	+710	+514	-416	-563	-459	- 92	- 61	+ 92	+116	+ 80	+129	- 61	- 55	+ 61	0	+ 15					
22		- 61	+306	+110	- 67	+ 49	- 80	+ 98	+441	+545	+435	+220	-441	-422	-184	-122	+ 86	+171	+257	0	+ 24	+300	+ 73	+110	- 24	+ 76					
23		-129	+ 61	+202	-220	-214	- 37	-318	+716	+747	+330	+282	- 18	+ 49	-196	- 80	- 12	+ 49	- 61	- 67	- 31	- 37	0	0	+ 18	+ 43					
24		- 55	- 67	- 55	- 49	- 12	- 55	- 49	+129	+471	+368	+ 12	+ 92	-612	-306	- 31	-220	+ 55	+ 49	- 18	- 61	- 31	+ 43	+269	- 98	+ 15					
25		- 43	- 92	- 61	-294	-153	- 67	+184	+ 73	+275	+435	+312	-129	-368	-404	-355	-184	+245	- 67	+ 37	- 24	+ 67	+ 31	+312	+ 86	- 8					
26		-233	-177	-373	-459	-416	+171	- 61	+190	+233	+496	+373	- 61	-196	-177	-245	-190	- 24	- 37	- 61	-177	- 61	-129	- 55	-110	- 71					
27	X	-122	-147	+ 61	- 73	-122	- 73	- 61	+ 55	+245	+477	+294	-129	-300	-300	-251	-135	- 55	0	0	- 31	0	- 67	- 55	-110	- 37					
28	X	-122	-122	- 67	- 18	- 55	0	+ 67	+245	+416	+526	+171	-190	-300	-275	-122	+ 49	+171	+251	+110	+ 37	+ 49	- 55	-171	- 49	+ 23					
29	X	- 24	0	- 49	- 12	0	+ 49	+ 86	+184	+441	+520	+367	-312	-477	-367	-196	- 92	0	+ 67	+ 49	+ 49	+ 49	- 55	- 55	- 49	+ 7					
30		- 49	-122	+122	+ 86	+233	+129	+ 12	+ 80	+257	+251	+ 86	-392	-373	-306	-233	+ 86	+159	+263	+ 73	+ 73	0	+ 55	- 67	- 73	+ 15					
31		- 92	- 86	- 67	- 55	+ 49	+129	+312	+275	+606	- 73	+245	- 61	-184	-202	-428	0	- 98	- 31	+116	+ 92	+ 67	+ 92	- 49	0	+ 24					
MEANS ALL DAYS		-107	- 34	- 54	- 49	- 64	- 1	+ 10	+188	+329	+302	+171	-239	-315	-233	-130	- 31	+ 79	+ 84	+ 86	+ 65	+ 71	+ 22	+ 9	- 34	+ 5					
MEANS 10 DAYS		- 43	- 34	- 26	- 2	- 56	+ 7	+ 14	+169	+324	+281	+138	-280	-334	-245	-146	- 86	+ 34	+ 67	+ 48	+ 67	+ 69	- 9	- 53	- 72	- 7					

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1937

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

DECEMBER 1937

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° 15' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-129	-55	-239	-490	-319	-270	-294	+123	0	+208	+116	+239	-55	-67	-196	-67	+74	+184	+392	-37	+129	-294	-245	-25	-30						
2		-245	-31	-221	-190	-123	-147	-55	+18	+129	+306	+233	+18	-178	-110	+49	+251	-61	-123	+227	+190	+184	-49	+49	+67	+8						
3		+49	-147	+374	+294	+251	+221	+239	+374	+374	+558	+490	+184	+37	-123	-110	+61	+116	+233	+153	+123	+306	+233	+110	+67	+186						
4		0	-31	-356	-55	+49	+184	+251	+313	+435	+454	+527	+190	-49	-129	+61	+147	+184	+61	+86	+123	+67	+129	+110	+178	+122						
5	X	+251	+147	+74	+61	+80	+110	+123	+123	+313	+233	+233	+313	+12	-172	-61	+86	+61	+37	+184	+368	+374	+276	-74	-116	+126						
6		+49	-12	+74	+172	-184	+110	+306	+184	+362	+374	+343	+110	-37	-55	-61	-123	+67	+18	+184	+129	+306	+159	-31	-31	+101						
7		+123	-37	+147	+123	+80	+55	-37	+239	+331	+625	+503	-147	-368	+80	-61	+190	+98	+172	+110	+233	+429	+184	+313	+98	+145						
8	X	+31	+61	+67	+129	+49	+129	-153	+313	+398	+343	+460	+123	+67	0	-233	-98	-18	+67	+129	+429	+294	0	-116	+49	+105						
9		+49	+80	+12	+12	-61	+61	+25	+61	+147	+245	+374	+196	+55	+49	-331	+61	+190	+31	+239	+184	+184	0	+74	+123	+86						
10		+49	+184	-116	+49	0	+49	+208	-153	+61	+300	+368	+331	+67	-55	-74	+129	-61	+172	-37	-25	-61	+129	+539	+245	+96						
11		-12	-61	0	+110	-233	-37	+116	+61	+116	+282	+325	+331	+153	-123	-67	+31	+251	+215	-67	+61	0	-129	+61	+18	+58						
12	X	+61	+86	+49	-18	+37	0	0	-61	+74	+178	+184	+123	+67	-61	+61	+306	+319	+313	+276	+215	+178	+172	+190	+129	+120						
13	X	+129	+245	-55	+196	+67	+49	+67	+233	+294	+233	+172	-12	-37	-55	-116	+61	+67	+74	+49	+184	+306	+306	+264	+172	+121						
14	X	+282	+221	+129	+129	+123	+123	+61	+331	+368	+441	+356	+270	+123	-18	-135	-110	-61	0	0	+86	+116	+129	+123	+67	+131						
15	X	+67	+55	+172	+196	-12	+190	+116	+184	+300	+423	+435	+129	-196	-178	-123	-55	+61	+153	+221	+245	+190	+61	+80	+129	+119						
16	X	+129	+221	+245	+245	+215	+196	+196	+233	+362	+300	+251	+135	+49	-135	-178	+49	+190	+147	+172	+135	+129	+172	+153	+123	+156						
17		+135	+110	+184	+184	+178	+135	+184	+190	+239	+429	+313	+190	+61	+55	-67	-92	+129	+123	+153	+392	+380	+294	+61	-49	+163						
18		-31	+184	+147	+147	-215	+306	+239	+343	+478	+374	+674	+282	+67	+405	+380	+123	+417	+61	+92	+86	+98	+153	+245	+80	+214						
19		-693	+356	+18	-12	-74	-110	-278	+184	+184	+932	+313	+294	+625	-337	-110	-172	-61	+98	+196	+190	+251	+215	+49	-31	+85						
20		-49	-49	-215	+147	+92	+86	+270	+123	+184	+331	+1079	-172	-215	-208	0	-98	+147	+221	+18	+67	+55	+12	+172	+86	+87						
21		+12	-37	0	+25	0	+12	+55	+215	+319	+619	+791	+92	-184	-251	-74	-221	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	+625	+564	+729	+80	-74	-129	-190	0	+25	+123	+55	+67	+257	+172	+233	+61	..
23		-18	+67	-116	+80	-239	+576	-270	+791	+766	+944	+944	+362	+245	-356	-116	-178	-135	-74	-12	0	0	+37	0	+110	+142						
24		+43	0	-49	-25	+31	-61	-61	+12	+245	+680	+864	+668	-74	-245	+61	-306	-159	-69	-69	-74	0	+31	+215	-55	+67						
25		+61	+25	0	-129	-67	-153	+178	0	+184	+423	+484	+356	+55	-190	-294	-208	+221	-31	+172	-37	+233	+276	+582	+184	+97						
26		+172	+129	+61	-31	0	+166	+503	+343	+417	+558	+613	+490	+245	+80	-61	-104	+49	+123	+49	0	+86	+61	+300	+196	+185						
27	X	+233	+190	+392	+245	+245	+251	+294	+313	+398	+582	+601	+490	+294	+67	-55	-67	+184	+245	+233	+276	+429	+417	+484	+429	+299						
28	X	+398	+319	+306	+429	+343	+306	+257	+490	+441	+552	+490	+331	+12	-129	-116	-12	+172	+398	+110	+61	+123	+67	-74	+129	+225						
29	X	+67	+61	+12	+61	+49	+74	+98	+123	+306	+515	+619	+215	-92	-184	-190	-178	-74	+49	0	+49	+49	+12	+49	+55	+73						
30		+37	-12	+135	+80	+147	+202	+80	+190	+306	+374	+313	+31	-123	-184	-184	+31	+172	+239	+129	+67	+96	+184	+86	+67	+182						
31		+49	+80	+74	+98	+184	+215	+564	+368	+760	+319	+613	+417	+49	+67	-239	-49	+49	-202	+55	+129	+110	+282	+153	+61	+175						
MEANS ALL DAYS		+44	+82	+45	+77	+24	+104	+111	+208	+309	+432	+458	+224	+30	-80	-88	-13	+89	+101	+119	+133	+173	+142	+135	+88	+123						
MEANS 10 DAYS		+165	+101	+139	-167	+120	+143	+106	+228	+325	+380	+380	+212	+30	-86	-115	-2	+90	+148	+137	+205	+219	+161	+108	+117	+147						

TABLE 199

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17° . 8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+ 49	+117	-148	- 92	- 92	- 12	+ 86	+154	+400	+412	- 49	-467	-492	-135	-215	+ 86	+131	+111	+191	+ 49	+221	-141	- 62	+ 37	+ 8						
2	X	-123	+ 62	-117	+ 62	- 49	+129	0	- 31	+369	+326	+111	-332	-406	-308	-197	0	+172	+277	- 62	+123	+ 74	0	- 68	+ 37	+ 2						
3	X	+ 68	+ 62	-105	0	- 74	0	+135	+375	+418	+234	+ 92	-246	-178	-369	-320	- 80	+ 37	+154	+ 98	+135	+295	+154	- 74	-209	+ 25						
4		- 62	- 62	-234	- 55	+ 86	-234	+101	+228	+929	+769	+357	+ 62	+148	+314	+160	- 55	+209	+590	+ 62	+123	+129	- 37	+117	-351	+ 87						
5	X	- 25	+148	-234	+ 86	0	- 18	+ 49	+221	+320	+344	+123	-97	-314	-363	-154	- 31	+ 74	+ 31	+ 74	+ 49	+ 68	+ 31	0	0	+ 12						
6		- 55	- 49	+141	- 31	0	+184	- 62	+271	+683	+861	+148	-314	-314	-430	-308	-160	-123	+ 62	+246	+172	+129	+184	+ 74	0	+ 55						
7	X	-117	- 92	- 55	- 62	-148	+ 55	+154	- 68	+ 68	+129	+129	+ 25	+123	- 92	-314	- 62	+ 92	+172	+295	+683	+744	+172	+ 80	-123	+ 74						
8	X	+ 6	- 74	-215	-160	-160	- 55	+ 18	+191	+467	+492	+ 68	-314	-394	-480	-320	- 31	+314	+295	- 74	+455	+295	+ 68	- 37	-184	+ 7						
9	X	-123	-154	- 98	- 62	-117	-117	- 12	+308	+326	+94	+184	-332	-394	-523	-394	-160	- 31	+105	+184	+ 62	+ 31	+123	- 74	-117	- 41						
10	X	-172	- 31	-191	0	+ 25	- 92	+ 12	+154	+369	+400	+172	-394	-609	-492	-338	+ 62	+123	+ 68	- 62	+ 55	- 49	+ 62	- 37	- 49	- 42						
11	X	- 74	-123	- 62	+ 18	- 92	0	+ 31	+197	+308	+246	+ 86	-209	-240	-301	-184	+ 62	- 55	+ 62	+ 18	0	+ 49	-111	- 55	- 12	- 18						
12		-166	+295	-137	- 62	- 62	+ 18	- 62	+160	+246	+117	+184	-597	-500	-314	-117	+424	+424	+467	+683	+892	+861	+646	+357	-166	+143						
13		-504	-168	+ 80	- 49	-246	-295	-320	- 62	+369	+129	+191	0	-295	-228	-215	- 94	+ 49	+ 68	+ 12	+ 55	- 18	0	- 25	- 62	+110						
14		+ 74	-178	- 62	-129	-277	- 43	-172	- 25	+369	+467	+369	-443	-523	-258	-197	-197	- 55	+246	+191	+ 98	- 55	- 12	+184	+430	- 8						
15		+ 98	- 37	- 86	-191	-221	-252	- 62	+184	+523	+430	+172	-295	- 68	-363	-375	- 12	+ 74	+117	+111	+111	+ 49	+ 37	- 55	- 25	- 6						
16		0	- 49	+111	-129	-252	- 92	-55	+240	+683	+123	+215	- 62	-215	+ 80	+ 68	+590	-627	-400	-461	- 86	- 68	+424	+246	-387	- 4						
17		-314	+1882	-184	- 12	-332	-1716	+734	+800	+876	-430	+892	+246	+314	+203	+258	+314	-123	+234	+ 68	+123	-191	+148	+ 49	-246	+233						
18		- 62	+117	+ 68	+129	0	- 37	+ 92	+344	+701	+344	- 43	-129	-744	-295	+215	+332	-160	-271	- 62	+ 86	+166	+ 74	- 74	-148	+ 27						
19		-554	+160	+191	+ 80	-166	- 62	+ 25	-332	+572	+ 92	+597	-400	-381	-308	-154	-172	-117	- 37	+ 62	+ 86	+129	+363	+246	+338	+ 11						
20		-129	-197	-178	0	-166	-209	-369	+597	+769	+394	+295	-184	+1538	-972	+123	+246	+264	+357	+252	+160	+763	-215	-308	-277	- 22						
21		+264	+726	+129	+ 68	+ 68	-117	-683	+394	+646	+652	+547	-154	-670	-929	-498	+209	-215	+184	-646	-344	+344	-572	+1414	+1076	- 39						
22		..	..	..	..	..	..	..	+1267	-209	-308	-246	-240	-308	-437	-172	-560	-283	-117	- 62	-111	-105	+ 49	-172	-338	..
23		-178	-258	-351	-166	+ 31	-221	-172	+437	+455	+683	+664	+ 25	-357	-535	-910	-615	+129	- 12	-129	+ 68	+ 68	- 86	-135	+148	- 59						
24		-111	0	- 86	- 98	+148	-117	- 12	+369	+283	+455	+455	-283	-609	-627	-492	-129	+ 62	+172	+234	- 31	- 92	-246	- 62	-117	- 39						
25		-123	- 68	- 55	- 74	- 18	-197	+430	..	..	..	..	..	..	..	..	..	..	..	..	..	-492	-701	-301	-443	..
26		-277	-430	- 49	-1359	- 55	+ 25	- 55	+394	+467	+203	+246	-135	-584	-258	-332	- 98	- 25	- 55	- 68	- 62	-117	- 92	-123	- 49	-120						
27		- 92	-111	+ 92	-111	-117	- 31	+ 68	+197	- 92	+148	+289	+258	-308	-480	-437	-246	-105	- 25	+ 49	0	+ 68	- 62	-135	-129	- 55						
28	X	+ 49	- 86	0	- 31	- 12	- 68	+117	- 18	+154	+129	+178	- 68	-154	-184	-215	-295	- 49	+129	+ 25	+ 18	+ 49	+ 68	+234	- 18	- 2						
29		- 62	0	- 55	-320	- 49	+ 49	+ 49	+ 49	+ 37	+ 55	- 74	-449	-633	-135	-221	+191	-295	-148	0	+ 25	-178	- 55	-123	- 68	-100						
30	X	-332	-320	-258	-234	-184	-234	-215	-320	-295	-117	- 68	+ 55	-135	-424	-277	-430	-148	+ 18	- 80	-148	-117	0	-178	- 92	-188						
31		-289	-689	+424	- 86	+264	+ 49	- 31	- 18	+301	-529	+ 92	- 62	-400	+590	+351	-357	+191	+271	+111	+184	+ 25	+ 68	- 37	- 62	+ 15						
MEANS ALL DAYS		-111	- 19	- 60	-103	- 78	-121	- 28	+186	+439	+274	+228	-186	-378	-297	-207	- 25	+ 9	+112	+ 46	+108	+127	+ 34	- 51	- 28	- 5						
MEANS 10 DAYS		- 84	- 61	-134	- 38	- 81	- 40	+ 29	+101	+250	+258	+108	-201	-270	-354	-271	- 96	+ 53	+131	+ 42	+143	+144	+ 57	- 21	- 77	- 17						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
JANUARY 1938
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS 93.9										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		+117	+178	-74	0	-49	+117	+252	+246	+368	+430	+252	+61	-98	-86	-154	+61	+129	+123	+172	+98	+215	-49	+55	+190	+106																
2	X	+12	+184	+117	+49	+92	+184	+31	+239	+301	+362	+375	+215	-123	-190	-154	-86	+172	+215	-117	+123	+129	+68	+49	+184	+101																
3	X	+184	+68	-68	+49	-18	0	+123	+436	+430	+430	+313	+190	+68	-172	-276	-154	-74	+172	+123	+246	+313	+178	-117	-68	+98																
4		+123	-55	-61	0	+178	-43	+111	+276	+252	+663	+688	+418	+614	+289	-835	-319	+129	+221	+49	+98	+74	+37	-55	-92	+138																
5	X	+55	+190	-68	-12	+190	+190	+190	+418	+436	+430	+418	+172	-49	-123	-123	-55	+68	0	+61	+49	+68	+61	+68	+61	+112																
6		0	+86	+246	+68	-31	+215	+129	-12	+559	+921	+792	+55	-111	-209	+12	-190	-190	+111	+356	+190	-49	+190	+92	+68	+137																
7	X	0	+31	-37	-31	-68	-31	+61	-117	-55	+61	+172	+675	+577	-55	-129	-92	+74	+123	+203	+774	+835	-485	+381	+147	+128																
8	X	+49	+55	-190	-55	-74	-61	-12	+49	+313	+442	+356	+129	+61	-117	-172	+12	+313	+325	-307	+393	+154	+61	0	-92	+68																
9	X	-61	-55	-68	-31	-55	-61	-74	+172	+160	+375	+503	+184	-117	-362	-356	-209	-61	+129	+203	+129	-49	+61	+55	-12	+12																
10	X	-49	+61	-55	0	+61	-61	-92	+61	+172	+295	+381	+172	-172	-368	-319	+12	+98	+111	-55	+37	-25	+117	+61	+61	+21																
11	X	+31	-68	+49	+460	+55	0	+61	+123	+184	+61	+307	+239	+184	-61	-123	+49	-98	0	+61	+49	+92	+117	+61	+80	+80																
12		+31	+184	-68	-55	-61	-25	-61	+61	+31	+12	+620	+111	-307	-184	+178	+718	+663	+1228	+909	+1019	+890	+651	+233	-92	+278																
13		-510	-700	-92	+190	-61	-196	-313	+92	+129	+221	+332	+307	+111	+68	-12	+178	+123	+129	+37	+252	+190	+307	+276	+239	+54																
14		+221	-31	+135	+49	+12	+31	+43	-49	+184	+313	+620	+147	-98	-68	-184	-233	-55	+405	+190	+190	0	+178	+424	+485	+121																
15		+313	+135	+184	+68	+61	-31	+184	+319	+540	+497	+614	+190	+362	-12	-92	+129	+184	+215	+203	+190	+178	+233	+190	+129	+208																
16		+154	+160	+160	-31	-160	-55	+49	+209	+522	+233	+313	+368	+166	+215	+92	+111	..	..	..	..	..	..	..	..	..							
17		+319	+1283	+184	-123	+154	-706	+2530	+325	+1934	-933	+368	+682	+700	+319	-276	-178	-160	+184	-31	-92	-233	+332	+196	0	+282																
18		+104	+123	+49	+129	+92	+31	-31	+239	+589	+344	+172	+669	-467	-270	+172	+442	-319	-301	-154	+68	+74	+178	0	+61	+83																
19		-362	+258	+55	+184	+25	-160	+221	-154	+485	+436	+663	+6	-190	-98	-123	-436	-368	-123	-55	+68	+172	+307	-160	+761	+59																
20		-61	-68	-104	+31	+68	-184	-319	+37	+295	+344	+528	+804	-454	+1130	-92	..	..	..	..	..	..	..	..	..	..						
21		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		-37	+61	+31	+18	+61	-74	+190	..	..	..	..	..	..	..	..	..	..	..	+184	-61	-49	-221	-74	-61	..					
26		-270	-368	-117	-632	-295	-215	-252	+92	-178	+61	+252	+141	-172	-68	-258	-246	-111	-74	-104	-86	-135	-74	-80	-18	-134																
27		-129	-166	+129	-117	-172	0	+12	+295	+190	-147	+246	+743	-55	-117	-362	-196	-166	-49	-98	-37	+80	-61	-123	-68	-15																
28	X	+68	-37	+49	-12	-31	-61	+49	+25	+12	+123	+301	+184	+61	+154	-92	-301	-12	+49	+55	+18	+68	+184	+123	+74	+44																
29		+61	-12	0	-227	-55	+154	+55	+68	0	+111	+178	-129	-190	+368	+63	+368	+61	-49	+92	-74	-178	-61	-49	+111	+28																
30	X	-55	+55	0	+49	+129	+178	+147	+12	-12	+184	+313	+497	+559	+68	+12	-270	+55	+258	+37	-111	-31	+172	+61	+184	+104																
31		-221	-282	+356	-111	+68	+129	+49	+86	+602	-123	+313	+209	-160	+1842	+792	-731	-68	+123	+49	+111	+61	+92	+68	-49	+134																
MEANS ALL DAYS		+1	+47	+27	-5	+6	-18	+142	+138	+318	+232	+398	+261	+41	+45	-117	-92	+16	+147	+78	+154	+121	+111	+75	+98	+94																
MEANS 10 DAYS		+23	+48	-27	+47	+28	+28	+48	+142	+190	+276	+344	+266	+105	-123	-173	-109	+54	+138	+26	+171	+155	+41	+74	+62	+77																

* = 10 LEAST DISTURBED DAYS

TABLE 201

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-122	-92	-177	-98	-61	-649	+202	+367	+147	+122	+61	-73	-135	+116	-122	-37	+208	-31	+135	+153	+233	+135	-55	+122	+15
2		-98	-282	-55	+300	-61	-116	+49	+129	+257	+275	+153	-122	-245	-300	-312	-129	-116	+153	+435	-67	+153	+183	+275	0	+19
3		+435	-153	-233	-31	0	-86	-135	+165	+165	+581	-61	-73	-171	-183	-49	-171	+61	+294	+49	+86	+116	+18	+73	+171	+36
4		-24	+80	-233	+61	-67	-12	+122	+92	-49	+116	-92	+214	-67	-135	-147	-18	+214	+61	+73	+257	+24	+110	0	-129	+19
5		0	+37	-122	0	+153	+80	+239	+245	+171	+98	-55	-190	-367	-300	-129	-12	+177	+245	+61	-80	-153	+471	+612	+1889	+120
6		-490	-275	-129	+104	-294	-31	-37	+183	+477	-147	-649	+704	-220	-37	+135	+245	+67	+379	+477	-153	+110	-12	-49	-31	+14
7		+122	-31	-86	-214	-55	-312	-55	+129	+43	+483	+245	-49	-306	-483	-300	+31	+98	+171	+86	+92	+116	-12	-31	-37	-15
8		-55	-12	+31	-61	-177	-67	+135	+80	+826	+102	-330	-330	-245	+122	+661	+55	+373	-31	+116	+447	+569	+373	-557	+355	+141
9		-116	-171	-196	-441	-422	-183	+122	-128	+955	+508	+490	+312	+24	-392	-502	-257	-73	+190	+324	-24	+979	+55	+245	+557	+65
10		-381	+361	+12	-73	+147	-220	-24	+306	+239	+129	+190	+129	+122	+61	+37	+67	-49	+31	+251	+600	+122	+569	+734	-514	+98
11		+967	+477	-789	-581	-67	-110	0	-129	-61	+73	+153	-98	-31	+110	+116	+171	0	-49	+55	+55	-49	-73	+49	+183	+16
12	X	-61	-92	+245	-67	-37	+31	-220	-251	+324	+269	+269	0	-208	-129	-61	+306	+116	+171	+183	-67	+18	+67	+86	0	+37
13		-67	+73	+67	+416	+49	-122	-61	+129	+355	+312	+147	+18	-122	-367	-435	-318	+61	+398	+422	+196	-24	+147	+771	-441	+67
14		+110	-716	+294	+496	+183	-257	+37	-734	+183	+998	+661	+116	-12	+67	+49	+116	+104	+129	+61	+37	+110	+37	-31	-55	+83
15	X	-98	-55	-73	-12	+61	+67	+92	+251	+398	+539	+220	-171	-312	-306	-367	-312	-61	+122	+129	+49	+61	0	+31	+24	+12
16	X	-49	-300	-18	0	+49	+73	+73	+312	+441	+373	+122	-177	-477	-539	-337	-80	+31	+122	+177	+129	+110	+61	+18	+129	+10
17	X	-31	+171	+31	+73	-116	0	+67	+104	+183	+190	+190	-37	-300	-337	-294	-447	+55	-61	+67	+110	+233	-31	-135	+55	-11
18	X	+49	0	-67	-18	-122	+61	-49	-122	+251	+373	+312	+245	+49	-202	-343	-275	-171	+190	+171	0	+61	+61	+12	0	+19
19	X	-12	-12	+49	+61	+61	+73	+92	+171	+233	+275	+355	+135	-135	-294	-318	-337	-165	+67	+73	+49	+37	+61	+122	+153	+33
20	X	+98	-31	-37	+12	+49	-67	-129	+208	+245	+367	+318	+67	-183	-379	-441	-245	-24	+208	+129	+135	+61	+92	+61	+37	+23
21	X	+49	+61	-226	+196	+67	-18	+55	+135	+306	+416	+330	+55	-294	-349	-318	-183	-49	+73	+110	0	0	-24	-55	-49	+12
22	X	-67	-61	-49	+12	0	-12	+61	+251	+312	+312	+171	-86	-300	-422	-171	-73	-147	-49	+183	+257	+12	0	+245	-165	+9
23		-251	+49	+73	-245	-31	+37	0	+153	+337	-129	+269	-55	-24	-67	-61	+43	-122	+183	+147	+73	+67	+116	+306	+171	+43
24	X	+306	-55	-153	-122	-98	-49	-55	+171	+12	+171	-12	-159	-355	-183	-12	+67	+12	+122	+92	+67	+24	+18	0	+67	-7
25		+49	-214	+110	+80	+153	+43	+73	+245	+61	+129	-98	-31	-55	-92	-300	+153	+55	+61	+49	-31	+239	+24	-49	-6	+27
26		-61	-80	-49	+31	+61	-165	+135	+318	+208	+245	+67	-49	-208	-428	-67	+275	-92	+24	+80	+177	+165	+49	-67	-37	+22
27		+49	+12	0	+49	+129	-61	+294	+165	+355	+459	+129	-177	-355	-416	-367	-49	-190	+55	-37	+355	+190	-61	+239	+80	+35
28		-61	-190	-275	-539	-18	-147	-31	+98	+294	+159	+116	-294	-404	-233	+67	+43	+190	+557	+214	+49	+92	-67	+275	-37	-6
MEANS ALL DAYS		-11	-54	-73	-22	-17	-79	+38	+98	+274	+314	+131	-6	-191	-218	-157	-49	+20	+135	+154	+105	+130	+85	+112	+82	+33
MEANS 10 DAYS		+18	-37	-30	+14	-9	+16	-1	+123	+270	+328	+228	-13	-252	-314	-286	-158	-40	+96	+131	+73	+57	+30	+38	+25	+14

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1938

FEBRUARY 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 37	- 62	-118	-130	-118	-286	+137	+106	- 12	+112	+279	+242	+180	+385	0	- 81	+273	- 81	+ 62	+186	+193	+ 62	- 12	+279	+ 65
2		- 6	-186	- 19	+136	- 56	- 81	- 62	+ 87	+286	+217	+279	+193	+ 50	- 31	-174	-186	-174	+186	+348	-199	- 12	+248	+279	+ 87	+ 50
3		+497	+ 50	- 75	+261	+149	+112	+ 25	+317	+168	+484	- 19	+193	+186	+217	+ 93	- 50	+ 31	+248	- 50	- 56	+ 62	+ 31	+ 75	+143	+129
4		+124	+155	-130	+ 62	- 37	- 50	+ 62	+323	- 93	- 50	- 68	+441	+155	+124	- 12	0	+193	+124	0	+323	- 68	+ 75	+ 25	- 75	+ 67
5		- 25	+ 62	- 62	- 62	+124	0	+261	+ 93	- 12	+ 12	+124	+186	+ 50	- 56	-118	-124	+ 12	+199	+ 50	-186	-310	+739	+832	+851	+152
6		-224	- 75	- 99	- 31	-217	+ 12	-193	- 99	+ 93	+441	-317	+758	+466	- 56	+460	+373	- 56	+373	+286	-199	-161	-186	- 87	-161	+ 46
7		+137	- 50	- 81	-224	-199	-155	-155	-273	+211	+584	+534	+193	- 56	-310	-248	- 68	- 62	+ 87	- 31	0	+ 75	0	+ 50	+106	+ 3
8		-161	+ 68	+ 75	-130	-298	-304	- 31	-242	+503	+497	+621	+137	-279	+460	+596	- 87	+447	-168	+ 25	+484	+578	+323	-559	+317	+161
9		+ 87	- 93	- 62	-366	-528	- 93	+112	-366	+329	+354	+646	+584	+155	-279	-360	-255	-118	+279	+224	+217	+751	+360	+261	+633	+103
10		-627	+180	- 62	-211	- 68	-155	- 68	0	0	+180	+130	+199	+205	+112	+112	-112	- 50	+ 75	+397	+758	+342	+379	+317	-497	+ 69
11		+751	+205	-410	-484	-186	-124	- 75	-304	-137	- 56	+ 19	+ 25	+ 25	+118	+180	+217	+ 19	-118	-112	- 31	- 68	- 99	+118	+ 50	- 20
12	X	- 50	-248	+124	+ 31	-155	- 56	-292	-205	+ 56	+106	+273	+236	+106	+ 6	+ 37	+199	- 19	+ 87	+ 68	-149	+ 31	+112	+155	- 87	+ 15
13		- 62	+ 37	- 31	0	0	-112	- 50	+ 93	+193	+404	+217	+149	+112	-155	-342	-348	- 75	+286	+335	+155	- 37	+236	+298	-217	+ 45
14		+497	-528	+180	+217	+ 12	-130	+155	-373	+248	+963	+782	+379	+199	+155	+ 62	- 37	- 75	- 31	0	- 68	+ 62	+ 62	+ 19	- 50	+112
15	X	-112	- 68	-124	- 75	- 68	0	- 56	0	+236	+428	+428	+236	+ 50	- 50	-242	-310	-242	- 62	+ 19	- 19	+ 75	0	+ 56	- 50	+ 2
16	X	- 31	-248	+ 31	- 37	+ 31	+ 37	0	+186	+298	+335	+310	+199	- 56	-124	-143	-118	- 12	- 37	+124	+174	+186	+186	+193	+385	+ 78
17	X	+124	+379	+ 75	+174	0	+199	+255	+255	+298	+497	+745	+590	+255	+ 93	+ 31	-224	+ 62	+ 68	+112	+186	+366	- 81	- 12	+ 99	+189
18	X	+180	- 68	+ 68	0	+ 50	+ 68	- 12	-155	+ 62	+193	+348	+491	+441	+304	- 19	-186	-193	+118	+ 31	0	+ 62	+ 50	+ 37	+ 62	+ 80
19	X	+ 12	+ 12	+ 62	+ 37	+ 50	+ 50	0	+ 62	+124	+248	+422	+360	+236	+112	- 25	-186	-174	- 37	+ 50	+ 12	+ 50	+124	+279	+248	+ 89
20	X	+124	+130	+137	+193	+199	+186	+149	+279	+248	+317	+441	+404	+186	0	-174	-118	- 50	+174	+137	+153	+ 75	+161	+112	+ 75	+147
21	X	+ 81	+ 93	-217	+317	+137	+ 87	+ 50	+ 87	+161	+317	+428	+298	+ 93	+ 93	0	0	- 62	+ 12	+ 62	+ 31	+ 50	+ 50	+ 25	+ 50	+ 93
22	X	- 25	+ 37	+ 62	+ 81	+130	+ 68	+ 75	+124	+193	+217	+193	+193	+124	- 50	+155	+ 81	- 93	0	+366	+404	- 62	- 56	+ 68	-137	+ 90
23		-248	+ 81	+155	-317	0	0	+248	-112	+186	0	+248	+310	+503	+323	+ 12	+186	- 93	+ 62	- 25	+ 62	+ 31	+124	+186	+174	+ 87
24	X	+236	+ 37	- 75	- 75	- 12	- 56	- 56	+186	- 56	+ 50	+ 75	+155	-112	+137	+255	+174	- 56	- 50	+ 31	+ 87	- 12	0	0	+ 87	+ 40
25		+ 68	-186	0	- 93	+236	+137	+186	+174	+118	- 25	+174	+255	+404	+ 87	-112	+130	+ 6	+ 62	0	+ 19	+286	0	+ 31	+ 50	+ 84
26		0	-124	- 50	+ 31	+ 68	-248	+137	+112	+217	+186	+248	+180	+248	-130	+149	+323	+ 62	+155	+310	+379	+248	+ 99	+ 93	+ 93	+116
27		+124	+ 62	+ 62	+ 31	+180	+ 12	+323	+ 68	+317	+422	+466	+ 93	+ 56	+137	+224	+310	- 37	+435	+335	+900	+590	+ 99	+385	+317	+246
28		+248	+143	- 25	+ 68	+310	+261	+211	+174	+55	+242	+335	+112	+174	+627	+217	+217	+248	+646	+224	+112	+ 68	-130	+379	+124	+218
MEANS		+ 60	- 7	- 22	- 21	- 9	- 22	+ 47	+ 21	+160	+303	+300	+276	+148	+ 84	+ 22	- 2	- 10	+110	+121	+133	+123	+106	+129	+141	+ 91
ALL DAYS																										
MEANS		+ 54	+ 6	+ 14	+ 65	+ 36	+ 58	+ 11	+ 82	+162	+271	+366	+316	+132	+ 52	- 12	- 69	- 84	+ 27	+100	+ 88	+ 87	+ 55	+ 91	+ 73	+ 82
10 DAYS																										

* = 10 LEAST DISTURBED DAYS

TABLE 203

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-257	-116	-172	-18	+123	+110	+61	-527	+625	+625	-61	-343	-74	-607	-25	+61	+166	+325	+294	+31	+61	+116	-49	+43	+16						
2		+55	+276	+61	-49	-49	+67	+159	+405	+460	+306	+49	-86	-190	-172	-49	-61	+55	+98	+74	+294	+147	-55	+12	+86	+79						
3		-67	+12	0	+67	+55	+110	+190	+430	+552	+374	+61	-343	-484	-270	-319	-129	+61	+190	+116	+86	+123	+276	+116	+98	+57						
4		+61	-184	-49	-55	-25	-61	+116	+392	+429	+368	+25	-190	-300	-546	-270	-184	+380	+527	-31	+67	+116	+49	+80	+276	+41						
5		+521	+129	-110	-55	-61	-270	-319	-92	+368	-196	+880	+147	+184	+55	-123	-356	-49	-196	+116	+595	-123	+423	+190	+49	+71						
6		+190	-576	+147	-61	-135	-123	-49	+172	+172	+190	+129	-67	-356	-264	-319	+12	+49	+25	+135	-49	+61	+67	+135	+276	-10						
7	X	-49	0	-92	-31	+159	-61	+178	-80	+123	+208	-18	-196	-245	-300	-245	+25	+116	+86	+172	+61	+123	-37	+18	-61	-6						
8	X	-49	-110	-67	-173	-37	0	+74	+172	+313	+147	-67	-245	-245	-178	-110	+80	+110	+12	+129	+98	+55	+61	+245	+61	+11						
9	X	+61	-18	-25	+12	-49	+98	+129	+245	+92	+49	-190	-245	-135	-129	-129	+116	-37	+178	+129	+67	+55	-49	0	0	+9						
10	X	-12	-49	-86	-61	-37	0	+123	+313	+129	-178	-349	-497	-392	-18	+123	+104	+190	+67	+116	+110	+67	+74	+55	+67	-6						
11		-25	+61	-55	+74	+49	+49	+123	+257	+184	0	-172	-282	-343	-221	-49	-37	-55	+190	+67	-98	+147	+98	+478	+147	+24						
12		-98	-184	+55	-37	-61	+31	+221	+503	-129	-166	+12	-227	-196	-129	+37	+67	+208	+31	0	+67	+190	-12	-55	-12	+5						
13	X	-12	-55	+49	+55	+61	+92	+153	+337	+245	-184	-398	-306	-294	-196	+25	+153	+441	+80	+98	+123	+460	-257	-61	+123	+30						
14		+245	-368	+202	+153	+80	+61	+313	+294	+527	+306	-61	-306	-398	-337	-441	-135	+417	+398	-61	+61	+110	-104	-110	-67	+32						
15	X	-129	-49	+61	-67	+92	-110	+270	+723	+742	+441	-55	-441	-497	-374	-300	-184	+37	+74	+80	-67	-61	-49	-67	-55	+1						
16	X	-67	-67	+31	+37	+92	+74	+319	+619	+398	-49	-196	-441	-558	-319	-129	-74	+147	+123	+235	+313	-31	-74	-55	+55	+16						
17		+12	0	-67	-172	+123	+74	+215	+245	+803	+196	0	-257	..	..	..	..	..	..	..	..	..	..	..	..	..
18	X	+61	+153	+116	+98	+98	+172	+245	+478	+539	+61	-215	-368	-374	-215	-55	+190	+245	+233	+129	+110	+98	+129	+129	+190	+94						
19	X	+67	+49	-18	+98	+80	+129	+313	+680	+607	+306	-49	-282	-533	-460	-306	-49	+141	+172	+110	-12	+55	+104	+74	+67	+56						
20	X	+61	+49	+61	+61	+67	+116	+343	+552	+423	+123	-159	-380	-423	-313	-49	-61	+49	+196	+184	+55	+67	+37	+61	0	+47						
21		-12	-25	-12	0	-55	-61	+423	+423	+423	+276	-55	-215	-411	-313	-245	-766	-257	+215	+736	+380	+116	+92	+263	+1018	+122						
22		+503	+129	+116	+270	+319	-61	-116	+454	+239	-98	-129	-533	-294	-25	-55	+55	+98	+546	-55	-55	+129	+190	+233	+245	+88						
23		-245	+251	-1232	+460	-61	-37	+221	+405	+190	+239	-110	-245	-656	-270	+349	-61	+883	+748	+944	+552	-490	+460	+766	-98	+123						
24		+270	+208	-760	+282	+129	-49	+147	+270	+239	+123	-98	-288	-313	-294	-55	-86	0	-67	-49	+129	-67	-18	0	-331	-28						
25		+80	-178	+92	+25	-368	+356	+190	+374	+392	+153	-86	-92	-319	-55	+147	-313	-313	-31	+766	-558	-37	-25	+245	+80	+22						
26		+18	-49	0	+49	-337	+337	+392	+147	+251	+92	-349	-233	-104	+135	+411	+80	+153	+61	+682	-245	0	-80	+110	+116	+67						
27		+61	+61	+215	+184	+86	+190	+313	+392	+276	-104	-337	-331	-215	0	0	+98	+86	+61	+123	+67	+74	+67	+74	+67	+63						
28		+123	+98	+172	+98	+67	+178	+196	+239	+374	+123	-300	-484	-374	-190	-61	-116	+61	+184	+129	+233	+306	+276	+270	+257	+77						
29		+245	+208	+251	+294	+245	+123	+398	+619	+478	+699	-67	-932	-184	-49	+245	+313	+251	+184	+184	+239	+319	+104	+257	+116	+198						
30		+61	+190	+98	+86	+135	+184	+374	+680	+619	+184	-362	-460	-362	-129	+12	0	+135	+129	+184	+166	+129	+178	+178	+153	+107						
31		+123	+49	+129	+123	+190	+153	+251	+656	+736	+300	-135	-417	-478	-343	-178	+116	+257	+368	+282	+245	+202	+147	+135	+129	+127						
MEANS ALL DAYS		+60	-4	-27	+64	+28	+60	+192	+353	+367	+157	-45	-311	-319	-218	-72	-38	+134	+174	+200	+102	+80	+73	+158	+103	+51						
MEANS 10 DAYS		-7	-10	+3	+2	+53	+51	+215	+404	+362	+92	-170	-340	-370	-250	-118	+30	+144	+122	+138	+86	+89	-6	+40	+45	+25						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-156	+25	+118	+124	+143	+336	+255	0	+460	+628	+361	+249	+610	-218	+106	-37	+68	+211	+62	-56	-62	+124	-112	-50	+133						
2		-37	+193	+317	+112	+131	+243	+317	+429	+404	+261	+162	+218	+137	+187	+87	-149	-131	+50	+100	+386	+224	-62	-2	-12	+146						
3		-56	0	-31	-31	+19	+62	+93	+249	+367	+429	+255	-75	-56	-62	-249	-187	+31	+174	+174	+162	..	..	..	..			
4		..	..	..	..	..	..	..	+68	+224	+342	+187	+199	+342	-19	-62	-112	+373	+379	-299	-62	+274	+137	+199	+610	..
5		+311	+411	+156	+62	+31	+62	+124	+585	+131	-180	+163	+933	+684	+547	-56	-267	-62	-261	+243	+473	-330	+336	+87	+50	+218						
6		-56	-728	+249	-37	-37	-62	+37	+62	+62	+162	+218	+560	-19	+12	+62	+137	+68	-156	+56	-68	-68	0	+174	+174	+33						
7	X	-75	+68	-62	-187	+174	-50	0	-75	+31	+124	+56	+156	+131	+50	-56	+112	+124	+62	+112	-37	+118	0	+25	-112	+29						
8	X	-112	-75	-31	-174	0	+12	+37	+12	+137	+112	-131	-62	0	0	-56	+174	+50	-62	0	0	0	+44	+93	+156	+5						
9	X	+25	-12	-31	+31	-93	+68	+62	+68	-31	-62	-93	+93	+187	+124	+87	+180	-62	+193	-37	-19	-100	-124	-50	-25	+16						
10	X	-56	-56	-124	-75	-56	-62	-37	+124	0	-118	-205	-224	-124	+137	+174	+75	+156	+19	+50	+19	+62	+68	+25	+118	-5						
11		-50	+62	-75	+68	+12	+25	-19	+112	+112	+118	+62	0	0	-56	-68	-124	+68	+379	-156	-299	+124	+236	+379	0	+38						
12		-162	-193	+81	-68	-31	+50	+112	+249	-56	-62	+112	+131	+149	+81	+50	-25	+56	+12	0	+31	+249	0	-56	-56	+27						
13	X	-56	-50	-50	-19	+50	+12	+37	+112	+131	-62	-100	-62	-62	-75	+62	+137	+373	+124	+62	+68	+87	-124	-100	+68	+23						
14		-6	-317	0	+87	-68	+118	+100	+211	+311	+348	+174	+81	-118	-100	-491	-305	+236	+435	-124	+56	+62	-31	-112	-62	+20						
15	X	-187	-62	-12	-187	+124	+118	+124	+317	+560	+373	+311	-31	-68	-187	-305	-193	-62	-12	0	-131	-100	0	-68	-62	+11						
16	X	-62	-112	-37	-68	-12	-62	+68	+336	+373	+62	+37	-56	-75	-187	-118	-267	-62	-62	+180	+317	-137	-187	-93	0	-9						
17		-50	-75	-124	-112	-56	-25	+37	+112	+373	+124	+199	+68	-75	-180	-261	-100	+37	+100	-62	-149	-62	-12	0	-50	-14						
18	X	-56	-44	-62	-62	-56	0	-25	+75	+193	0	-75	-118	-131	-118	-68	+68	+62	+62	+31	-6	-56	0	+62	+31	-12						
19	X	+37	-62	-187	-19	-62	-68	+93	+311	+348	+224	+12	-124	-274	-187	-224	-124	+12	+62	+62	-124	-93	-56	-31	-31	-21						
20	X	-56	-56	-56	-62	-56	-50	+68	+218	+187	+56	-56	-75	-37	-118	+25	-75	-93	+81	+180	-50	-12	-93	0	-62	-8						
21		-68	-112	-100	-131	-106	-124	+187	+124	+149	+249	+156	+68	-187	-75	-137	-740	-249	+218	+753	+336	+81	+143	+176	+591	+92						
22		+703	+187	-491	+224	+379	-131	+187	+367	+187	-56	+124	-56	-31	+112	-68	-124	+342	+858	-311	-50	+267	+31	-348	+211	+105						
23		-267	+50	+1088	+243	-87	-112	+56	+162	+243	+249	+149	+280	-68	+56	+566	+355	+722	+697	+174	+647	-746	+249	+37	+87	+106						
24		+404	-249	-591	+174	+299	-68	-174	-12	-25	-68	-100	-37	+124	+37	+156	+25	-112	-112	0	+124	-124	-68	+12	-336	-30						
25		-62	-168	-56	-62	-261	+50	+62	+137	+299	+149	+19	+299	+124	+305	+460	-261	-162	+100	+367	-205	-311	-56	+137	+56	+40						
26		-75	-124	-87	+87	-423	+236	+267	-56	+224	+435	+106	0	-174	..	+460	..	..	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	+174	+193	-25	-131	-124	0	+243	+50	+25	-19	0	+50	-112	-56	+68	0	0	..
28		+68	+56	+87	+50	+62	+174	+156	+131	+299	+218	-62	-75	-50	-62	-75	-118	+187	-68	-62	+118	+62	0	0	+12	+46						
29		0	-31	+75	+68	+12	-124	+31	+180	+174	+672	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30		-19	+75	-62	-50	0	+62	+131	+355	+398	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS		-5	-55	-90	-4	+18	+19	+78	+174	+203	+119	+104	+92	+34	+4	-6	-69	+65	+122	+70	+58	-36	+17	+49	+29	+42						
MEANS		-60	-46	-65	-82	+1	-8	+93	+150	+193	+71	-24	-50	-45	-56	-48	+9	+50	+47	+64	+4	-23	-47	-14	+8	+3						

* = 10 LEAST DISTURBED DAYS

TABLE 205

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1938

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

APRIL 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS 58.4										DIRECTION N 17°-8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+122	+67	+73	+189	+61	+158	+189	+597	+780	+244	+280	-110	-396	-560	-304	0	+122	+298	+274	+171	+97	+128	+110	+110	+112						
2		+116	+110	+110	+128	+146	+122	+304	+554	+615	+420	+61	-402	-639	-585	-183	+183	+329	+317	+341	+231	+171	+116	+97	+110	+116						
3	X	+140	+128	+49	+110	+292	+292	+330	+353	+396	+298	+128	-73	-207	-116	-171	-134	+140	+292	+311	+250	+432	+475	+97	+24	+162						
4	X	+110	-128	-12	+414	+189	+183	+110	+371	+792	+128	-128	-274	-365	-268	-317	+67	+231	+353	+244	+146	+146	+231	+146	+79	+102						
5		+244	+116	+146	+73	+171	+231	+457	+639	+426	+61	-189	-371	-420	-329	-183	-61	+213	+304	+518	+134	+244	+219	+304	+542	+145						
6		-122	+359	+834	0	+37	+73	+414	+609	+481	+311	-122	-311	-341	-572	-414	+67	+171	+633	+457	+365	+304	-37	+67	+146	+142						
7		-12	+152	+73	+30	-85	+244	+499	+615	+457	+73	+146	+116	-152	-183	-61	-134	-116	+274	+171	+73	+122	+67	+49	+122	+106						
8		+97	+128	+134	+122	+61	+365	+475	+676	+231	-97	-189	-128	-189	+49	+262	+67	+49	+171	+128	0	+55	+97	+128	+171	+119						
9		+171	+219	-49	+262	+140	+61	+30	+907	+573	+213	+61	+30	-67	-177	-134	+91	+304	+61	+231	-24	-134	+73	+37	+128	+126						
10		+122	+219	+12	-49	+183	+402	+365	+944	+152	-426	-420	-317	-171	-18	+146	+189	+274	+292	+128	+110	+85	-12	+171	+183	+107						
11		+189	+73	+177	-128	+335	+250	+311	+512	+201	+542	-627	-189	-85	+67	+110	+140	-97	+189	+110	+152	+134	+171	+225	+158	+122						
12		+183	+213	+317	+177	-37	+37	+639	+615	+365	-280	-633	-467	-292	-396	+286	+298	+390	+341	+189	+317	+250	+30	+73	+122	+113						
13		+183	-73	-134	+201	-55	-122	+950	+731	+469	+755	-244	-219	-304	-207	+329	+256	+901	+761	+201	+761	+238	+426	+780	+341	+289						
14		+116	-152	+219	+61	+481	+311	+700	+737	+323	+268	+195	+79	-335	+177	+280	+24	-152	+171	+554	-97	+171	+201	-37	+97	+183						
15		+67	+79	+219	+122	-49	+298	+743	+1060	+676	+371	-426	-579	-621	-609	-396	+67	+219	+518	+146	-73	+61	-73	+24	+353	+92						
16		+847	+2527	+1973	-2259	+402	+1797	+1370	+694	+280	-177	-670	-560	-304	-177	-378	+73	+177	+171	-30	-24	-128	-61	-67	-152	+222						
17	X	+97	+116	+122	+158	+250	+304	+524	+853	+920	+18	-317	-591	-335	-621	-231	-110	+79	+451	+457	+134	-61	+91	+116	-213	+92						
18	X	-122	+304	+67	+152	+146	+329	+487	+670	+621	-55	-298	-146	-359	-396	-292	-171	+183	+487	+365	-97	-55	+61	+128	-152	+77						
19		-49	+61	-49	-24	+195	+298	+487	+102	+633	+97	-597	-481	-487	-414	-79	+97	+146	+213	+158	+146	+171	+122	-55	+85	+74						
20		+97	-97	+110	+158	+177	+189	+493	+731	+262	-110	-177	-213	-174	-158	-292	-116	-61	+189	+274	+189	+183	+67	+110	+30	+73						
21	X	+61	-30	+231	+152	+116	+183	+414	+554	+365	-55	-67	-122	-244	-317	-359	-91	+110	+371	+475	+244	0	+280	+49	+97							
22	X	+18	+116	+152	+73	+61	+274	+207	+171	+122	-122	+67	+91	-250	-67	+91	-61	-207	+250	+402	+37	+189	+134	+432	+219	+100						
23		+219	+451	+414	+536	-329	-487	-85	+597	+560	-12	+152	-183	+371	+79	+122	-207	-122	+225	+177	+298	-152	+43	+110	-49	+114						
24		-274	+231	-67	+61	+152	+244	+378	+493	+353	-55	+37	-122	+73	-329	-359	-134	-61	+189	+116	+244	+530	-37	+731	+67	+103						
25		-250	+207	+311	-164	-55	+85	-311	+298	+438	+146	-219	-122	+146	-61	-171	+61	-152	+365	+244	+171	-49	0	+73	+67	+44						
26		-104	+183	+146	+256	-122	+128	+250	+280	+292	+61	-85	-244	-280	-335	-244	-85	+231	+268	+195	+49	+67	+110	+164	+134	+55						
27	X	+61	+110	+177	+177	+171	+195	+438	+706	+365	+201	-597	-554	-250	-183	-61	-55	+122	+298	+298	+189	+122	0	+49	+122	+71						
28	X	+122	+61	+183	-244	+189	+158	+298	+548	+311	0	-457	-438	-335	-171	-73	+61	+152	+231	+122	+55	+31	+55	+189	+189	+74						
29	X	+183	+189	+134	+189	+207	+189	+438	+572	+396	-110	-438	-414	-238	-122	+24	+79	+171	+304	+189	+171	+122	+116	+85	+128	+107						
30	X	+122	+49	+110	+128	+177	+244	+457	+706	+365	-238	-396	-292	-73	+85	+158	+73	+128	+231	61	+61	+61	+12	+67	+91	+99						
MEANS		+92	+200	+200	+52	+200	+234	+414	+630	+441	+69	-206	-254	-247	-230	-96	+18	+129	+307	+250	+146	+116	+104	+138	+108	+115						
ALL DAYS																																
MEANS		+79	+92	+121	+180	+130	+235	+376	+550	+465	-34	-250	-281	-266	-218	-123	-34	+111	+327	+292	+119	+105	+146	+136	+49	+98						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1						
2	X	..	..	..	..	..	..	..	+330	+367	+199	-50	-124	-68	+50	-37	0	+75	+118	+218	+249	-62	-50	-62	-31	..
3		-25	+31	-62	-37	+131	+62	+50	+112	+199	+236	+156	+180	-68	+50	-100	-199	+50	+180	+280	+156	+386	+411	-37	-124	+84						
4	X	+50	-249	-50	+137	+187	+44	-62	+149	+379	+162	0	-75	-124	-249	-56	+62	+131	+100	+50	+12	+62	+37	+25	+25							
5		+112	-12	+50	-50	-25	+50	+124	+255	..	..	..	..	..	..	..	..	..	+386	+87	+205	+311	+435	+398	..	
6		-305	+211	+709	-75	-156	-236	+19	+243	+249	+311	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	+112	-56	-199	+50	+317	+280	+734	+330	-118	-112	-137	-112	0	+156	+93	..	..	+305	+255	+180	+100	+199	+162	..				
11		+205	+81	+93	-137	+224	+218	+131	+435	+429	+684	-93	-124	-56	+249	+249	+68	-199	-56	+137	+131	+162	+162	+124	+205	+138						
12		-56	+156	+280	+224	+75	-37	+442	+367	+243	-31	-131	-62	-75	-267	+162	+112	+174	+230	+180	+261	+230	+25	+62	+81	+110						
13		+174	-75	-180	+118	-131	-529	+180	+585	+311	+597	-112	-131	+62	+236	+591	+435	+1232	+833	+411	+753	-100	+547	+958	+68	+287						
14		+336	-56	-162	-106	+143	+1524	+578	+429	+243	+317	+647	+398	-218	+585	+460	-131	-180	+311	+690	-100	+131	+25	+68	+112	+252						
15		+31	+19	+131	+81	0	+218	+392	+709	+877	+641	+50	-162	-274	-323	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	-280	+236	-56	-274	-68	-56	+50	-622	+62	-93	+118	0	+50	-124	+12	-75	-68	..
17	X	+37	+118	+25	+162	+62	+112	+243	+672	+796	+311	+131	-342	-31	-547	+62	-131	-305	+311	+124	-62	-280	0	+50	-112	+59						
18	X	-50	+236	+112	+75	+56	+174	+311	+255	+411	+211	-19	+255	+56	+68	-124	-398	+149	+442	+249	-435	-68	+68	+31	-56	+84						
19		-19	-25	-62	+62	+62	+37	+112	+690	+653	+423	-168	-112	-249	..	..	..	..	..	0	+75	+12	-62	-187	+87	..	
20		+75	-50	+68	+124	+75	+68	+280	+491	+100	0	+62	..	..	..	..	..	..	..	+193	-249	+342	+87	+68	0	..
21	X	-50	-62	+131	+93	+75	+56	+224	+373	+224	+62	+112	+236	+100	-112	-211	+25	+243	+280	+249	+131	-299	+373	-50	0	+92						
22	X	-31	+12	+62	+25	-37	-75	+50	+75	+12	-124	+174	+672	+112	+118	+87	+75	-187	+236	+274	-75	+131	+25	+193	+187	+83						
23		-68	+367	+348	+522	-156	-323	-75	+535	+690	+305	+280	-56	+684	+199	+143	-653	-156	-124	+199	+249	-529	+124	+149	-131	+105						
24		-255	+75	-137	-12	-137	+131	+112	+299	+361	+236	+379	+162	+187	-180	-326	-137	-174	+87	+81	+162	+535	+75	+423	-342	+66						
25		-162	+62	+255	-50	-305	+118	-367	+187	+348	+498	+124	+112	+68	0	+68	-12	-131	+398	+174	+56	-100	-75	-62	-124	+45						
26		-255	+112	+68	+261	-280	+68	+137	+124	+137	+19	+12	-56	-149	-75	-162	-124	+162	+174	+156	+12	+68	+50	+124	+68	+27						
27	X	-62	+12	+100	+87	+62	+68	+193	+429	+286	-50	-218	-218	-81	0	+62	-68	+50	+124	+180	+174	+68	0	0	+31	+51						
28	X	+56	-31	+124	+106	+124	0	+68	+236	+124	+62	-75	-56	-118	-50	0	+56	+112	+124	-19	+37	+25	0	+249	+56	+50						
29	X	-62	+62	-62	+50	+56	-31	+50	+249	+199	-56	-131	-124	-118	0	+75	+62	+62	+118	+68	+68	+62	+31	+31	+68	+30						
30	X	+75	-19	+68	+131	+124	+124	+218	+485	+317	-81	-87	-75	-50	+131	+180	+12	+87	+193	+12	+12	+50	-50	0	+50	+79						
MEANS ALL DAYS		-8	+46	+56	+92	+15	+94	+138	+331	+317	+187	+64	+33	+10	+18	+59	-59	+58	+222	+197	+88	+27	+103	+131	+3	+93						
MEANS 10 DAYS		-6	+11	+45	+83	+84	+53	+134	+304	+295	+75	-4	+45	-32	-47	-22	-62	+32	+214	+152	+6	+9	+92	+50	+12	+64						

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 207

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LINE OM		LENGTH IN KMS 58.4										DIRECTION N 17°.8 E										
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN								
1		+ 12	+140	+171	+189	+ 85	+183	+371	+487	+311	- 12	-268	-335	-256	-231	-274	-104	+420	+ 67	+146	+116	+292	- 49	0	+110	+ 65								
2		+ 79	+195	+152	+304	+292	+189	+ 30	- 37	+311	+ 67	-122	-177	- 55	- 97	- 97	-238	0	+219	+ 85	+116	+134	+780	+676	+341	+131								
3		+ 61	- 49	-329	+274	+189	+171	+341	+225	+493	+207	-122	-365	-207	- 91	-213	+110	+ 18	+ 61	+463	+438	-183	+463	-183	-128	+ 68								
4		+122	- 55	+ 49	- 91	- 37	+219	+304	+ 97	+451	-231	-134	-219	+231	+171	+296	- 73	- 61	+128	+487	+920	- 91	-116	- 55	0	+ 58								
5		+ 55	+ 49	+ 67	+122	+110	+213	+426	+816	+615	-152	-390	-311	-110	- 73	-219	+195	- 97	+122	+171	+ 85	- 12	+ 67	+524	+ 79	+ 98								
6		- 85	- 85	- 12	+ 30	+183	+122	+524	+280	+ 47	- 55	- 55	+110	+183	0	-171	-238	-52	+104	+189	+ 67	+ 67	+122	+110	+ 79	+ 57								
7	X	+ 97	+122	+110	- 67	+ 73	+104	+292	+548	+457	- 67	-231	-116	0	- 97	-146	- 61	+ 61	+110	+110	- 61	- 24	+ 61	+365	- 43	+ 67								
8	X	- 97	0	+116	+ 49	+122	+134	+311	+445	+371	- 37	-365	-396	- 91	- 55	+122	0	+122	+213	+122	+122	+ 18	+ 55	+116	+110	+ 63								
9		+110	+ 85	+ 97	+ 73	+ 85	+189	+512	+719	+189	-189	-609	-457	-256	- 67	+ 49	+341	+396	+250	+432	-329	-128	0	+426	+292	+ 92								
10		-195	+ 49	+152	+128	+110	+317	+365	+560	+274	+ 55	-256	-414	-365	-128	+ 67	+207	+244	+238	+ 55	+268	+128	- 55	-152	-128	+ 64								
11		- 12	-152	+292	+416	+128	+268	+256	+694	+432	-706	+559	+1492	0	+151	+512	-670	+1035	+609	+140	+146	+432	+816	-603	+1614	+286								
12		+1096	-1157	-244	-134	+311	+371	+658	+146	-457	-116	-438	-457	-164	- 55	-134	+371	+390	+250	+171	-189	- 55	-116	0	+ 13	+ 3								
13	X	+ 55	0	+116	+189	+158	+286	+292	+280	+122	-268	-487	-384	-183	- 85	+ 12	+ 91	+311	+219	+359	0	+ 55	-189	+ 91	+ 18	+ 44								
14		+ 67	+199	- 18	-152	-365	+1230	+725	-737	+676	+134	+ 12	-292	-195	- 79	-244	+244	+122	+731	+493	+ 67	+110	-116	+171	-110	+111								
15		-298	-152	-110	+ 67	+298	+371	+231	+700	+493	+116	-298	-524	-292	-189	-238	+231	+396	+231	+238	+298	+244	+244	+171	+244	+103								
16		+402	-548	+481	- 43	+256	+213	+432	+298	+335	+164	-292	-396	-359	-311	-110	- 67	+311	+420	+244	+548	- 61	- 61	+ 61	- 97	+ 76								
17		+250	- 61	-451	+213	+304	+329	+505	+396	+ 61	+183	-298	-274	-390	- 61	-110	+ 91	+189	+219	+ 73	+122	+177	-152	+548	-189	+ 70								
18	X	+ 67	+353	+177	+244	+189	+238	+548	+426	+171	- 67	-134	-146	-134	+116	- 61	+ 85	+122	+ 73	+256	+110	+171	-152	+ 61	+110	+130								
19	X	- 30	+128	+171	+171	+244	+274	+365	+554	+ 67	-183	-420	-365	-122	-183	+ 49	+207	+207	+390	+177	+110	+110	+ 67	+ 67	+ 67	+ 98								
20	X	+ 61	+ 37	+ 61	+ 73	+ 61	+292	+438	+554	+317	-183	-432	-414	-280	-152	- 55	+195	+238	+304	+231	+110	+116	0	+ 55	+213	+ 72								
21		+ 97	- 43	+ 18	- 61	+238	+122	+365	+347	+292	-183	-298	-152	+ 12	- 79	+189	+134	+122	+189	+ 61	+ 61	+122	+195	+ 67	+110	+ 80								
22	X	+ 61	+ 43	- 61	+177	+244	+292	+463	+609	+311	-365	-238	-122	-268	+ 12	+ 67	+116	+ 73	+ 49	+152	+128	+ 97	+110	- 30	+110	+ 85								
23	X	+ 73	+ 67	+122	+134	+122	+128	+195	+183	- 61	-195	-292	-250	- 49	+ 12	+134	+189	- 12	- 49	+ 67	+ 79	0	+ 55	+ 67	+128	+ 35								
24		+171	+ 61	0	- 61	+122	+420	+414	+164	+262	+341	+157	-371	-378	-402	+426	+335	+798	+244	+ 67	+ 30	-359	+329	+ 91	0	+ 64								
25		+231	+201	+219	+195	+ 67	+177	+353	+432	- 12	-341	-548	-639	-329	+ 67	+164	+438	+499	+256	+ 91	- 24	+177	+177	+396	+ 24	+ 95								
26		- 49	+134	+104	+122	+128	+231	+292	+371	+183	-207	-560	-621	-426	-134	+110	+317	+371	+189	+128	+122	+171	+ 97	- 49	+ 55	+ 45								
27		-110	+183	+110	+146	+183	+244	+536	+682	+231	-317	-974	-1005	-426	-177	+292	+548	+548	+311	+ 91	+ 61	- 49	-231	+ 12	+250	+ 47								
28		+731	- 61	+ 24	+ 85	+183	+304	+371	+304	+329	-280	-597	-804	-609	-432	+353	+189	+518	+554	+292	+171	+426	+292	+390	+ 18	+115								
29		-268	+ 55	+755	+505	+ 97	- 67	+402	+262	+274	-274	-792	-390	-280	-213	+353	+110	+542	+171	- 55	-158	- 24	- 55	- 67	-122	+ 33								
30		+134	+ 55	+280	+359	+365	- 55	+512	+670	+244	- 55	-317	-335	-518	-274	-110	+ 24	+189	+238	+171	- 24	-122	- 30	- 67	+ 61	+ 58								
31	X	+128	+171	- 12	+177	+231	+295	+353	+286	+231	+ 37	-426	-542	-493	-171	+183	+ 49	+134	+304	+158	+146	+122	+ 49	+ 97	+128	+ 68								
MEANS ALL DAYS		+ 97	- 1	+ 84	+124	+154	+252	+393	+379	+230	-103	-322	-408	-220	- 74	+ 38	+109	+260	+239	+189	+118	+ 66	+ 96	+108	+108	+ 80								
MEANS 10 DAYS		+ 37	+106	+ 90	+127	+157	+228	+355	+426	+217	-154	-358	-336	-205	- 74	+ 42	+119	+163	+180	+176	+ 87	+ 84	+ 46	+ 84	+ 90	+ 70								

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE OW										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		- 62	+ 37	+118	+118	+ 37	+ 19	+130	+248	+198	+124	- 74	-124	- 31	- 50	-192	- 93	+340	- 68	0	+ 74	+371	- 74	- 56	+ 62	+ 44																
2		- 19	+ 80	+ 31	+310	+155	+ 62	- 31	+ 56	+186	+118	+155	+ 56	+ 68	+ 50	+ 50	-161	+ 37	+149	-130	- 31	+ 31	+669	+551	+384	+118																
3		- 19	- 61	-369	+173	+111	- 12	+124	+217	+433	+681	+359	+ 61	-118	-180	- 25	+371	- 62	+149	+526	+619	-607	-130	- 25	-192	+ 85																
4		- 80	- 31	+ 50	- 56	-105	+ 80	+161	-111	-687	+210	- 99	-155	+619	+582	-297	-235	-161	+ 31	+421	+279	+173	- 37	- 80	- 74	+ 17																
5		- 25	0	+ 37	+ 68	+ 62	+ 74	+192	+557	+669	+111	-105	-118	-118	-186	-149	+316	-186	+ 68	+124	- 62	-223	-310	+619	+279	+ 80																
6		- 93	-210	-186	-161	+111	-180	+248	+192	+303	+ 37	+118	+248	+254	+173	- 37	-130	-186	- 50	+ 56	+ 50	+ 37	+ 43	+ 62	- 50	+ 27																
7	X	+ 12	- 50	+ 62	- 62	+ 56	+ 50	+ 74	+334	+446	+130	-130	- 62	+ 56	0	- 25	- 62	0	- 37	+ 19	- 56	- 62	- 25	+204	- 50	+ 34																
8	X	-173	-111	+ 31	- 68	- 62	+ 62	- 31	+248	+297	+ 93	- 12	- 25	+ 87	+ 56	+130	- 62	+ 56	+ 93	+ 25	+124	- 50	0	0	- 31	+ 28																
9		+ 56	0	0	0	- 62	- 37	+130	+297	+118	- 56	-186	- 74	-124	-118	-124	+198	+378	+180	+260	-180	-155	- 93	+371	+124	+ 38																
10		-186	- 99	- 12	+ 31	+ 31	+ 56	+ 68	+347	+223	+217	- 12	-130	-186	- 74	+105	+155	+180	+ 74	+ 87	+223	+192	-173	-180	-118	+ 34																
11		- 62	-248	+248	+285	+ 99	-111	+ 25	+316	+173	-149	+696	-656	-186	+294	+347	+198	+873	+254	-124	+124	+149	+569	-966	+659	+242																
12		+514	-860	-371	-248	+297	+118	+576	+ 68	-161	+235	-130	-421	-149	- 56	- 80	+402	+316	-396	+130	-316	- 62	-180	- 68	- 99	- 31																
13	X	- 68	- 99	0	+ 68	+ 50	+124	+ 31	+ 50	+155	- 68	-186	- 87	- 62	+ 12	0	-210	+167	+111	+223	+ 80	+254	-371	- 56	- 50	+ 3																
14		- 93	+ 68	-155	-272	-279	+619	+501	-489	+378	+347	+545	+248	- 37	- 62	+ 50	+316	-619	+378	+130	- 56	+118	-594	+483	- 19	+ 63																
15		-285	-130	-111	0	+124	+161	0	+433	+310	+235	-111	-421	-155	- 50	-180	+180	+192	- 37	+105	+130	+ 99	+149	+210	+136	+ 41																
16		+310	-464	+495	- 74	+155	+ 93	+248	+186	+254	+ 74	- 74	-180	+ 62	-254	- 80	-118	+279	+310	-260	+483	-204	- 12	0	-446	+ 33																
17		+365	+ 68	-186	+ 56	+180	+ 99	+316	+279	+ 62	+124	-118	+ 37	- 68	+ 68	-130	- 37	+ 99	+ 62	0	- 74	+ 68	-439	+483	-217	+ 46																
18	X	+ 37	+186	+118	+111	+ 50	- 31	+192	+260	+130	+ 37	- 68	0	-192	+ 74	0	+130	+ 68	- 74	+ 50	+ 25	+ 99	+ 93	- 62	0	+ 51																
19	X	-130	0	+124	+ 62	+130	+111	+173	+365	+217	-130	-297	-186	-149	-254	+ 56	+192	+161	+310	+ 31	0	- 37	- 56	- 25	- 12	+ 27																
20	X	0	- 37	0	0	- 50	+111	+180	+198	+310	+ 12	-111	- 93	-254	- 68	+ 31	+124	+ 50	+ 62	+ 62	+ 12	+111	-124	- 62	+124	+ 24																
21		- 50	-192	-248	- 87	+ 62	- 50	+ 74	+111	+161	- 80	-118	0	+ 93	- 56	+310	+260	+124	+149	0	0	+161	+ 93	+130	+ 68	+ 38																
22	X	0	- 37	- 80	+124	+118	+ 50	+118	+316	+186	-204	-124	+ 93	- 87	+186	+186	+186	+ 12	-118	- 93	+ 62	0	-118	+ 50	+ 38																	
23	X	0	+ 50	+ 62	+ 74	+ 93	0	+ 50	0	-111	- 99	-124	- 50	+ 62	+111	+260	+260	+ 50	- 56	- 56	0	- 56	- 68	- 74	+ 93	+ 20																
24		+130	- 12	- 74	-180	- 50	+130	+ 50	+155	+241	+551	-489	-118	-279	-180	+582	+495	+786	+ 62	+ 56	- 56	-470	+439	-118	-111	+ 64																
25		+173	- 19	+260	+173	- 31	- 80	- 31	+310	+111	- 62	-173	-279	- 93	+ 87	+180	+501	+433	+186	+ 74	- 37	+ 68	+130	+458	+ 50	+100																
26		- 68	+118	+ 62	+ 74	+130	+ 74	+ 62	+124	+198	- 99	-192	-322	-359	-118	+161	+310	+254	+111	+ 31	+ 68	+ 56	+149	- 56	+ 50	+ 34																
27		-149	+180	+ 68	+ 50	- 25	+ 74	+279	+384	+ 68	- 56	-378	-520	-421	-279	+316	+594	+625	+421	+136	+173	- 50	-223	+ 12	+279	+ 65																
28		+421	0	+ 25	+ 74	+ 50	+118	+192	+192	+365	+149	- 62	-359	-402	-198	+526	+173	+501	+111	+254	+489	+638	+272	+495	-371	+152																
29		- 56	-310	+446	+508	-186	+161	- 43	+675	+378	-340	-681	-248	+111	- 25	+563	+322	+891	+186	0	- 62	+ 50	- 19	0	- 68	+ 94																
30		-124	-155	+347	+297	+334	- 19	+186	+470	+310	+248	+111	+ 93	-248	-223	- 37	+130	+254	+421	+365	+111	-124	+ 25	+ 68	+ 62	+121																
31	X	+ 68	+186	- 37	+149	+111	+118	+186	+192	+186	+ 25	-192	-180	-180	+ 80	+371	+180	+130	+111	+180	+186	+111	0	+ 62	+111	+ 90																
MEANS ALL DAYS		+ 11	- 67	+ 25	+ 52	+ 55	+ 66	+143	+225	+197	+ 78	- 41	-128	- 73	+ 11	+ 93	+158	+195	+102	+ 87	+ 77	+ 22	- 10	+ 73	+ 52	+ 58																
MEANS 10 DAYS		- 32	+ 28	+ 34	+ 53	+ 63	+ 67	+104	+209	+201	- 30	-144	- 91	-108	+ 8	+117	+105	+ 95	+ 51	+ 47	+ 50	+ 43	- 40	- 19	+ 28	+ 35																

* = 10 LEAST DISTURBED DAYS

TABLE 209

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1938

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

JUNE 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										58.4 DIRECTION N 17° 8' E				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1	X	+182	+115	+121	+49	+121	+304	+358	+461	+237	-279	-480	-328	-115	+12	+182	+127	+36	+121	+121	+212	-49	+49	-18	+164	+71
2		+24	-24	+61	+188	+225	-18	+364	+364	+310	-310	-486	-237	-146	+152	-121	+850	+287	+322	-42	-188	-127	+109	-12	-30	+62
3	X	0	+85	+146	+67	+73	+206	+316	+249	+73	-24	-297	-516	-267	-340	+49	+255	+231	+121	+67	+127	+121	-127	-73	0	+31
4		0	0	+146	+212	+188	+231	+334	+473	+364	+61	-279	-480	-413	-291	-182	-36	+67	+146	+352	+358	+170	+67	-24	+170	+68
5		+79	0	+49	-176	+109	+401	+328	+601	+121	-388	-765	-637	-334	-152	+176	+395	+486	+480	+328	+61	+36	+109	+55	+97	+61
6	X	+170	0	+115	+170	+182	+194	+516	+1087	-115	-601	-759	-589	-297	-49	+237	+449	+425	+188	+121	+67	+49	0	+61	+127	+73
7		+49	0	+140	+182	+291	+182	+461	+370	+237	-176	-437	-492	-656	-425	-79	-279	+486	+674	+370	+91	+219	+807	+188	+219	+101
8		-637	-401	+1032	+279	+219	+455	+607	+613	+121	-401	-941	-674	-607	+121	+146	+704	+747	+431	+140	-121	-49	-134	-364	-55	+51
9		-73	+134	+115	+140	+91	+219	+486	+364	+55	-334	-716	-558	-243	+61	+255	+243	+370	+188	-12	0	+55	0	+24	+73	+39
10		+219	+67	+212	+352	+219	+328	+473	+722	+30	+61	-819	-734	-419	+36	+249	+364	+279	+67	+291	+461	-55	-61	+61	+12	+101
11		+115	0	+61	+127	+97	+49	+510	+461	+413	-67	-152	-486	-425	-212	+285	+182	+358	+115	+243	+316	+291	+200	+243	-24	+112
12		-164	+134	+492	+212	-67	+212	+461	+680	+91	-184	-556	-698	-425	-601	-109	+36	+607	+401	+219	+473	+607	+115	+212	-30	+88
13		-97	+91	-73	+674	-328	+146	+783	+892	+722	+206	-334	-643	-449	-304	-49	+212	+176	+874	+146	+18	+176	+170	+158	+121	+129
14	X	+67	+61	+49	+109	+127	+279	+516	+583	+395	-85	-425	-619	-625	-546	-170	+297	+540	+449	+358	+61	-30	+36	+61	+85	+66
15	X	+49	+67	+67	+67	+109	+188	+407	+486	+249	-243	-540	-558	-419	-316	+85	+249	+370	+364	+291	+109	+73	+61	+55	+24	+54
16		+121	-85	+273	+279	+127	+364	+656	+310	-249	-206	-674	-819	-486	-170	+109	+431	+486	-455	+188	+158	+55	-55	-55	+67	+53
17		-12	+61	+73	+73	+67	+249	+413	+449	+328	+127	-249	-498	-431	-431	-61	+121	+273	+335	+255	-55	-36	+30	-61	+115	+50
18		-24	-109	+121	+49	+121	+273	+437	+419	+255	0	-370	-880	-880	-601	-158	+297	+486	+540	+322	+121	+61	0	+55	+91	+26
19		0	+109	+61	+134	+121	+170	+328	+340	+55	-97	-212	-516	-322	-127	-67	+176	+310	+231	+176	+61	+61	+115	+121	+85	+55
20		+127	+67	+109	+170	+121	+121	+243	+364	+291	-170	-358	-461	-480	-546	-18	+188	+231	+401	+243	+370	+388	+486	+492	+297	+112
21		+115	-461	-297	+206	+267	+182	+340	+291	+395	+158	-595	-783	-607	-237	-61	+231	+455	+425	+249	0	+182	+42	-67	+206	+26
22	X	+200	-176	0	+219	-67	+219	+206	+297	+231	-152	-291	-352	-109	0	+67	+115	+231	+297	+188	+30	+12	0	+61	+73	+54
23	X	+127	+109	+67	+85	+61	+115	+134	+206	+231	-73	-364	-304	-243	-55	+170	+237	+212	+152	+61	+36	-55	-30	+49	0	+39
24		-67	-121	-115	+115	+188	+121	+370	+152	+212	-67	-176	-310	-267	-243	-49	+158	+212	+127	+212	0	0	+67	-55	-18	+19
25	X	+73	+49	+115	+170	+176	+237	+310	+237	+152	-127	-401	-546	-358	+30	+182	+170	+310	+188	+115	-36	+61	-36	+121	+67	+52
26		+49	-91	+182	+188	+200	+219	+437	+461	+91	-243	-431	-334	-310	-231	+55	+370	+480	+443	+388	+176	+67	+170	-49	+152	+102
27	X	+127	+212	-12	+310	+61	+291	+364	+297	+364	+127	-328	-546	-431	-97	+188	+273	+455	+304	+182	+61	+61	+67	+61	+152	+106
28	X	+170	+170	+121	+291	+304	+364	+437	+498	+291	-291	-692	-662	-571	-437	-30	+486	+376	+304	+437	+49	+61	-30	-115	-61	+61
29		-49	0	0	+61	+85	+291	+364	+449	+310	+61	-219	-419	-722	-583	-297	+67	+182	+413	+194	+127	+61	+36	+127	-121	+17
30		-55	-61	-206	+152	+67	+61	+334	+431	+206	+176	-249	-546	-692	-546	-243	-61	+182	+61	+571	+219	+461	+522	+370	-364	+33
MEANS ALL DAYS		+30	0	+108	+172	+118	+222	+410	+454	+216	-118	-453	-534	-425	-238	+25	+244	+344	+316	+226	+112	+98	+93	+56	+56	+64
MEANS 10 DAYS		+116	+69	+79	+154	+115	+240	+356	+440	+211	-175	+458	-482	-344	-180	+96	+266	+319	+249	+194	+72	+30	-1	+26	+63	+61

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	- 37	+332	+172	+ 49	+ 61	+123	+172	+246	+104	-282	-313	- 55	+252	+313	+368	+221	+ 61	+ 49	- 31	+117	+ 92	- 68	- 68	+196	+ 86
2		- 12	- 74	+ 74	+123	+190	0	+111	+129	+190	- 55	-307	+ 80	+252	+651	+362	+025	+375	+301	+117	-160	- 74	+123	+ 31	- 18	+143
3	X	+ 49	+123	+ 43	+117	0	+ 49	+123	+135	+ 74	+ 18	-117	- 61	+ 68	+ 55	+344	+491	+393	+160	+111	+184	+ 61	+ 12	- 49	0	+ 99
4		0	+ 37	+111	+123	+160	+ 61	+123	+276	+307	+ 61	+ 49	- 68	- 55	- 68	- 49	+ 68	+111	+ 74	+301	+522	+344	+ 68	-239	+270	+108
5		+111	- 61	+ 74	-160	0	+135	+154	+424	+252	-117	-399	-246	- 92	+ 74	+239	+344	+281	+332	+184	+ 92	+ 61	+ 68	+ 49	+ 55	+ 81
6	X	+123	- 12	+129	+141	+ 55	- 49	+190	+866	0	-491	-332	-209	+ 37	+270	+375	+663	+632	+319	+246	+239	+196	+123	+111	+123	+156
7		+123	+129	+246	+246	+239	+ 25	+215	+209	+350	+129	+ 68	- 43	-332	-233	0	- 68	+491	+866	+682	+178	+ 61	+344	+853	+368	+214
8		-553	-319	+866	+160	+ 61	+313	+295	+405	+129	- 18	-252	- 92	-111	+239	+141	..	..	..	..	+ 86	+ 74	- 92	-215	+203	..
9		+ 18	+184	+190	+160	+ 61	+184	+307	+221	+129	-184	-190	- 92	- 61	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	..	+418	+313	-307	- 74	- 31	+356	+663	+491	+356	..	..	..	..	..	..	..	..
11		..	..	..	..	..	+ 68	+276	+436	+375	+129	+190	- 92	-123	-239	+332	+239	+ 55	+111	+246	+368	+154	+215	+307	+246	..
12		- 98	+190	+ 25	+319	+ 12	+147	+276	+559	+111	-209	-282	-111	+313	-424	- 92	..	..	..	..	..	..	+522	0	+160	..
13		-356	+154	+129	+448	+104	- 86	+430	+706	+362	+332	+ 74	-154	-123	..	..	..	..	..	..	+ 92	+111	+123	+111	+ 74	..
14	X	+ 61	0	- 25	0	+ 61	+ 68	+221	+362	+350	+ 86	+ 74	-190	-368	-362	-111	+129	+313	+246	+295	+ 92	- 49	+ 37	0	+ 98	+ 58
15	X	+ 49	+ 49	+ 55	+ 55	+ 61	+ 18	+172	+295	+276	- 74	-184	-246	-123	-123	+190	+239	+221	+178	+123	+ 61	+ 37	0	- 37	- 31	+ 53
16		+ 68	-190	+301	+252	0	+129	+233	+344	- 25	- 68	-375	-522	-196	0	+215	+467	+375	+313	+424	+246	- 31	-160	-129	- 49	+ 68
17		+ 61	- 55	+ 31	+ 61	- 37	+ 61	+184	+246	+123	+ 68	- 12	+ 49	- 12	-246	- 49	+221	..	..	..	..	..	..	..	..	..
18		..	- 61	+295	+ 68	+ 25	+135	+196	+307	+147	+ 61	- 55	-460	-430	-276	..	..	..	..	..	..	+ 31	+129	+117	..	..
19		+ 49	+160	+ 61	+154	+ 74	0	+172	+129	-154	- 61	+276	- 74	..	..	..	..	..	..	..	+184	+172	+190	+129	+111	..
20		+129	+123	+154	+129	+ 92	- 12	+ 37	+178	+246	+ 37	0	0	+ 74	+147	+221	+295	+368	+632	+356	+307	+418	+614	+442	+356	+223
21		+172	-338	-227	+215	+ 98	+135	+ 86	+123	+239	+362	- 61	-258	-424	-172	+ 68	+246	+479	+368	+190	+ 61	+ 61	+147	- 74	+184	+ 70
22	X	+246	- 68	- 31	+307	- 68	+ 68	+172	+424	+338	+ 12	- 61	- 92	+ 31	+123	+ 68	+ 61	+135	+196	+123	+ 12	- 31	0	+ 49	+ 49	+ 86
23	X	+ 98	+ 61	+ 61	+ 61	0	- 55	- 55	+ 86	+135	- 37	+123	- 12	+ 61	+160	+233	+435	+252	+117	- 55	0	- 37	0	+ 18	+ 68	+ 72
24		- 55	-172	- 92	+ 92	+123	+ 49	+154	+135	+190	- 55	+ 49	+ 61	+ 25	0	+154	+246	+239	+172	+190	- 25	+ 12	+117	- 55	- 31	+ 63
25	X	+ 31	+ 49	+ 74	+123	+ 86	+123	+184	+190	+ 92	- 55	-301	-368	-196	+239	+368	+270	+344	+147	+ 49	-123	- 92	+ 55	+ 92	+111	+ 62
26		0	- 74	+ 98	+160	+ 92	+160	+246	+295	+123	-154	-147	- 92	-123	- 61	+123	+246	+246	+ 68	+196	+172	+ 55	+111	- 98	+ 68	+ 71
27	X	+ 55	+111	- 86	+246	+ 61	+160	+172	+135	+233	+ 49	-233	-178	-178	+ 61	+252	+215	+418	+190	+ 68	+ 49	0	0	+ 61	+ 92	+ 81
28	X	+147	+117	+135	+436	+436	+430	+491	+614	+503	+123	- 92	-123	- 37	+ 68	+123	+375	+307	+295	+282	+252	+252	+190	+ 55	- 31	+223
29		+154	+239	+129	+147	+184	+246	+295	+301	+276	+154	+190	+190	-178	-362	+ 74	+178	+111	+270	+147	+ 92	+196	- 61	+252	- 74	+131
30		0	- 31	- 98	+135	- 61	- 68	+111	+ 92	+172	+252	+184	- 55	-209	- 74	+ 49	+111	+239	+418	+479	+129	+147	+516	+467	-221	+112
MEANS ALL DAYS		+ 72	+ 16	+ 62	+143	+ 89	+ 85	+172	+279	+211	- 5	-104	-118	- 81	+ 34	+175	+298	+309	+272	+213	+119	+ 80	+106	+ 82	+ 75	+108
MEANS 0 DAYS		+ 82	+ 76	+ 53	+154	+ 75	+ 94	+184	+335	+210	- 65	-144	-153	- 45	+ 80	+221	+310	+308	+190	+121	+ 88	+ 43	+ 35	+ 23	+ 68	+ 98

** = 10 LEAST DISTURBED DAYS

JULY 1938

JULY 1938

TABLE 211
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-109	-377	+128	+693	+134	+249	+298	+517	+444	+18	-328	-450	-480	-353	-49	+128	+195	+146	+182	-188	-122	+821	+213	+243	+82
2		-466	-116	-24	+12	+12	+73	+492	+432	+365	-91	-354	-383	-304	-243	-219	+36	+310	+213	+176	0	-55	+195	+182	+49	+12
3	X	-79	-79	0	-61	+91	+170	+249	+298	+128	-176	-310	-274	-231	-213	-61	+237	+134	+91	+30	+231	+310	+413	+213	+182	+54
4		+67	+219	+170	+243	-61	+61	+146	+143	+268	-298	-122	-578	-91	-85	+395	-243	-255	+188	-128	-213	+243	0	+170	+109	+19
5		+128	+61	+12	+61	+158	+316	+49	+389	+268	-30	-182	-255	+109	+91	+49	+109	-152	-73	+30	-128	+432	+851	-134	+669	+105
6		+176	-207	-36	0	+85	0	+310	+492	+851	+31	-213	-499	-492	-365	-91	-30	+128	+231	+30	+61	0	+49	+231	-91	+35
7	X	-61	0	+109	+122	-30	+243	+371	+474	+432	+61	-298	-462	-486	-304	-195	+243	+243	+188	+219	+182	+67	-61	-55	+176	+49
8	X	+158	-128	-97	+128	+219	+304	+486	+450	+377	-109	-608	-608	-298	-182	+67	+176	+243	+310	+182	-128	-91	0	+182	0	+43
9		-134	-36	+67	+170	+188	+304	+432	+559	+456	-49	-456	-736	-967	-760	-219	-243	+669	+1271	+669	+43	-231	+699	-328	+535	+79
10		+24	-79	-152	-91	+188	+334	+438	+122	-36	-85	+207	-657	-888	-237	-55	+632	+517	+1064	+553	+413	0	+170	+158	+122	+111
11		+122	+170	+122	+213	+268	+353	+432	+426	+426	+67	-188	-231	-274	+85	+394	+395	+371	+426	+268	+152	+170	+91	+61	+109	+181
12		+61	+122	+128	+122	+182	+243	+492	+535	+55	-195	-426	-438	-243	-109	0	+365	+426	+426	+353	+79	+61	0	+97	+182	+102
13		+97	0	+170	+219	+243	+255	+608	+517	+128	-176	-517	-492	-401	-675	-499	+243	+857	+669	+632	+766	+231	-61	-304	-61	+102
14		0	+91	+201	+128	+195	+91	+547	+778	+675	-61	-438	-675	-638	-170	+188	+182	+92	+365	+359	+91	+134	0	+219	-188	+99
15		+255	+608	+395	-97	+565	+365	+486	+511	+786	+572	+516	-176	-122	-632	-310	-18	+1271	+893	+699	-499	-268	+213	-669	-274	+194
16		-85	+274	-766	+237	-67	-49	+456	+608	+480	+122	-432	-541	-456	-97	-109	-280	+182	+243	+480	+304	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	-359	-310	-529	-359	-213	-61	+128	+18	+73	+316	-61	+24	+79	+61	-30	..
19		+49	+134	+207	+207	+67	+91	+213	+450	+128	-140	-480	-426	-274	-243	-152	-67	+274	+259	+249	+18	+109	+67	+292	+67	+50
20		+61	-176	-61	-67	0	+310	+480	+535	+265	-49	-365	-486	-359	-49	-49	+255	+304	+553	+310	+18	-55	+122	+188	-30	+73
21		+67	+30	0	-49	+109	+243	+492	+614	+462	+316	+12	+24	-249	-420	-298	-49	+152	+353	+274	+67	+213	-79	+91	+146	+105
22	X	+55	+49	+158	+73	+12	+91	+243	+450	+486	+231	-280	-322	-188	-49	+109	+182	+176	+298	+353	+219	+152	+243	+195	+67	+125
23	X	-55	+61	+30	+49	+134	+176	+426	+547	+438	-55	-268	-693	-882	-432	-61	-91	+413	+486	+389	+188	0	+12	+91	+73	+41
24		+152	+97	+128	+61	+188	+55	+675	+750	+310	-304	-717	-657	-608	-170	+231	+413	+432	+492	+274	+61	-61	+61	+73	+109	+84
25	X	+128	+122	+85	+170	+152	+310	+541	+632	+365	-207	-614	-608	-456	-182	0	+298	+657	+371	+213	0	0	0	+61	+55	+87
26	X	+170	+24	+134	+176	+231	+316	+644	+632	+85	-553	-790	-578	-328	-85	+188	+395	+334	+243	+122	+18	-176	0	+109	+55	+57
27	X	+170	+55	+116	+176	+207	+280	+535	+596	+480	-213	-821	-973	-778	-517	+243	+596	+669	+389	+231	+24	+73	+73	+91	+128	+76
28	X	+122	+122	+122	+152	+170	+255	+620	+918	+821	+176	-784	-912	-803	-480	-116	+268	+371	+292	+122	0	+109	-55	+73	-79	+62
29		-18	+122	-79	+243	+67	+438	+413	+857	+596	-79	-669	-1028	-760	-334	+152	+268	+559	+365	+340	+760	+49	-237	+1368	+426	+158
30		+316	-426	+274	-152	+365	+395	+517	+353	+608	+182	-340	-596	-353	-195	-249	+152	+176	-67	+73	0	+188	+55	+55	-49	+53
31	X	-61	-67	-128	-30	+152	+182	+377	+517	+274	-182	-663	-717	-456	-188	+61	+274	+395	+170	+170	0	+128	+146	+182	+158	+29
MEANS ALL DAYS		+49	+14	+78	+103	+135	+232	+429	+520	+394	-43	-381	-532	-439	-268	-24	+182	+363	+383	+264	+80	+57	+135	+111	+101	+81
MEANS 10 DAYS		+55	+16	+53	+96	+134	+233	+449	+551	+389	-103	-544	-615	-491	-263	+24	+258	+364	+284	+203	+73	+57	+77	+114	+82	+62

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1938
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

JULY 1938

COMPONENT EASTWARD LINE ON LENGTH IN KMS 93.9 DIRECTION E 0° 5' N

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 54	-513	+398	+ 36	+109	- 60	+211	+368	+362	+302	+121	+187	- 84	-121	+ 66	+109	+470	+ 66	+ 96	-151	-175	+362	+121	+398	+109
2		-151	-109	+151	- 30	0	-121	+187	+175	+247	- 48	-115	- 90	+ 48	+ 84	+ 12	+121	+338	+127	+109	0	- 66	+127	- 96	+205	+ 46
3	X	+ 60	+ 12	+ 12	- 24	+ 60	0	0	+ 90	+ 60	- 60	+ 30	+ 66	0	- 54	+109	+356	+241	0	-109	+121	+265	+386	+308	+181	+ 88
4		+205	+241	+ 66	+302	- 96	-157	-127	+169	+265	-145	+211	+241	+669	+603	+929	-621	-211	+ 48	-157	-151	+145	- 66	+428	+ 90	+120
5		+175	+ 60	0	+ 60	-265	+241	-211	+277	+ 66	+ 90	+ 30	+ 54	+434	+308	+187	+175	-175	-115	- 60	-169	+422	+748	-121	+675	+120
6		+187	+ 12	+ 90	+ 84	+ 60	+ 12	+109	+145	+350	+253	+181	-211	- 54	- 48	+ 90	- 30	+ 60	+ 48	- 55	+ 60	0	- 24	+127	- 60	+ 58
7	X	+ 12	+ 24	+ 66	+ 90	- 60	+151	+ 96	+241	+344	+295	- 48	- 60	-139	- 60	+ 84	+302	+151	+ 72	+ 60	+151	- 24	- 72	- 54	+115	+ 72
8	X	+ 84	- 36	-175	+127	+169	+157	+229	+247	+241	- 60	-169	-241	-127	- 12	+ 30	- 54	+121	+241	+181	- 36	- 66	0	+ 66	- 18	+ 37
9		- 96	0	+ 60	+151	+ 84	+115	+133	+366	+482	+181	0	-241	-633	-567	-133	-103	+904	+760	+241	-157	-211	+392	0	+277	+ 84
10		+ 66	-151	-205	- 54	+151	+ 90	+247	- 30	-187	+ 66	+748	+211	-639	-133	-181	-356	+253	+615	+259	+ 96	-127	-109	0	- 66	+ 53
11		-169	+ 30	-133	+ 12	0	0	+133	+241	..	..	..	..	..	+187	+320	+338	+229	+127	+ 30	+ 60	+211	+ 48	+ 66	+103	..
12		+ 30	+ 60	+ 96	+ 60	+ 96	- 12	+ 66	+181	- 30	-169	-175	-181	+ 48	+109	+187	+416	+368	+265	+247	+ 66	0	+ 60	+ 66	+ 90	+ 81
13		+ 30	- 84	+151	+151	+247	+151	+302	+332	+181	- 54	- 60	0	- 60	-440	-338	+386	+1085	+567	+452	+724	+241	- 60	-362	- 60	+145
14		- 30	0	+127	+ 84	+121	- 18	+326	+494	+482	+ 60	-121	-356	-338	+145	+482	+332	+332	+332	+205	+121	-145	0	- 84	-169	+ 99
15		+187	+ 97	+609	+127	+446	+410	+ 66	+374	+669	+603	+911	+452	+362	+169	+121	-277	+971	+446	+ 54	-428	-175	+ 90	-169	- 36	+253
16		+169	+121	-187	+302	+169	-271	+109	+446	+416	+410	+ 60	- 54	-217	+ 84	+ 72	-151	+187	+ 30	+271	+ 72	- 18	+169	+109	+ 84	+ 99
17		-615	+ 18	- 72	+157	+127	0	+121	+374	+308	-181	-133	+ 54	-145	+ 66	+235	+205	+271	+121	0	0	0	+109	+ 60	+ 48	+ 47
18		+ 36	0	+ 72	+ 72	+127	+ 36	- 60	+374	-145	-109	-139	-169	+ 72	+187	+205	+386	+193	+ 96	+416	- 60	0	+ 60	- 54	- 66	+ 76
19		+115	+121	+229	+169	+133	- 60	- 60	+199	+ 96	- 72	- 78	0	+121	0	0	+ 54	+181	+181	+241	+ 61	+181	+ 72	+308	- 36	+ 90
20		- 60	+ 12	+ 42	+ 36	- 24	+133	+169	+368	+181	- 54	-127	-145	- 42	+169	+ 72	+549	+356	+428	..	..	..	..	..	..	..
21		..	..	..	..	..	..	..	..	+187	+350	+265	+302	+ 60	- 90	-121	0	- 90	+ 72	+109	-133	-115	-127	- 18	-217	..
22	X	+109	- 12	+ 96	- 30	+ 30	-121	- 90	+181	+241	+169	- 60	-151	-121	+121	+205	+127	+ 48	+151	+181	0	+ 48	+127	+181	- 12	+ 59
23	X	+121	+ 12	0	- 54	- 60	-109	+ 66	+217	+289	+211	- 96	-476	-603	-193	+ 24	+ 30	+308	+295	+193	+133	- 84	- 60	- 24	0	+ 6
24		+109	0	+ 48	- 30	+ 66	- 72	+265	+434	+235	- 84	-308	-350	-416	-181	+127	+229	+289	+410	+223	- 36	- 66	0	+ 18	+ 38	
25	X	0	+ 12	0	+ 60	+ 66	+157	+181	+289	+241	- 60	-308	-229	-187	- 66	+115	+302	+410	+229	+109	0	0	0	- 60	+ 53	
26	X	+ 66	- 60	+ 48	+ 90	+121	+175	+362	+476	+181	-314	-320	+211	-115	0	+187	+326	+295	+169	+ 18	+ 48	-175	- 18	+145	+ 36	+ 81
27	X	+121	- 30	+ 54	+121	+121	+ 48	+151	+392	+422	+115	-362	-543	-362	-271	+295	+476	+410	+211	+109	- 48	0	+ 30	+ 66	+ 66	+ 66
28	X	+ 84	+115	+ 60	+ 90	+ 66	+109	+247	+591	+669	+314	-295	-422	-270	-386	-139	+368	+488	+452	+211	+169	+175	- 30	+121	-109	+103
29		- 42	+ 96	- 60	+157	+ 66	+295	+181	+434	+422	+314	-127	-537	-549	-109	+271	+422	+519	+332	+386	+585	+151	-271	+1417	+259	+192
30		+1049	+ 96	+482	+ 60	+241	-241	+151	+392	+271	+241	+ 36	- 60	-151	+507	+115	+247	+362	- 66	- 78	- 96	+217	0	0	- 48	+151
31	X	- 72	- 60	-211	- 18	+121	0	+ 60	+187	+145	- 30	-277	-362	-175	+109	+277	+440	+482	+127	+ 48	-109	+127	+ 66	+ 30	+127	+ 43
MEANS ALL DAYS		+ 70	+ 2	+ 72	+ 82	+ 90	+ 32	+118	+301	+272	+ 80	- 31	-116	-137	- 85	+130	+176	+334	+222	+138	+ 34	+ 23	+ 75	+ 92	+ 69	+ 88
MEANS 10 DAYS		+ 56	- 2	- 5	+ 45	+ 63	+ 57	+130	+291	+283	+ 58	-190	-221	-230	- 81	+119	+267	+295	+195	+100	+ 43	+ 27	+ 43	+ 84	+ 33	+ 61

* = 10 LEAST DISTURBED DAYS

TABLE 213

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1938
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
AUGUST 1938
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-327	+145	-121	+85	+369	+424	+774	+1022	+315	+127	-1264	-629	-593	-248	+375	+290	+538	+750	+538	+206	+611	-1022	-460	-127	+74
2		-121	-139	+60	0	+54	+278	+575	+544	+484	-48	-508	-738	-605	-333	-290	+157	+339	+472	+194	-411	-133	-121	-48	+73	-11
3		+127	+67	+60	+133	+109	+182	+393	+266	+127	-73	-599	-811	-544	-315	-121	+454	+786	+1513	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	+121	-460	-302	-363	+121	-97	+230	+182	+587	+121	+484	+121	+847	-263	+369	..
5	X	+30	+54	+109	+182	+182	+266	+557	+272	+115	-97	-242	-121	-121	-79	+24	0	+48	+424	-60	0	+290	-60	+60	+30	+78
6	X	0	-157	+60	+127	+290	+296	+514	+653	+151	-236	-442	-339	-54	-30	+157	+145	+302	+121	+60	-54	+60	+30	+381	+60	+87
7		-296	+218	+218	+145	+48	+145	+557	+901	+169	-835	-436	-666	-424	+169	+242	+212	+309	+290	+121	+169	+60	+236	+30	-127	+61
8		-60	+60	-121	+242	+188	+194	+454	+478	-67	-605	-635	-635	-357	-115	+127	+357	+424	+290	+182	+127	-67	-121	-12	+36	+15
9		+48	-151	+157	+109	+121	+242	+532	+726	+309	-551	-786	-593	-393	-127	+109	+430	+302	+48	-48	-109	-242	+60	-48	+454	+25
10		+24	+91	+182	-79	+175	+357	+635	+357	+18	-666	-841	-569	-254	-85	+151	+315	+490	+557	+248	-85	-127	-48	+18	+218	+45
11		-139	-242	+629	+478	+1331	+1500	+424	-151	+424	-169	-424	-871	-653	-369	-133	+599	+333	+309	+79	-121	-169	..	..	..	..
12		..	..	..	..	..	..	..	..	..	-266	-641	-944	-793	-417	+30	+302	+672	+623	+538	+254	-60	+103	-127	-175	+91
13		-242	+67	+115	+48	+54	+169	+666	+750	+121	-623	-853	-872	-454	-296	+60	+315	+339	+194	+48	+175	-60	-60	+121	+212	+8
14	X	+230	+188	+109	+175	+188	+242	+533	+853	+363	-333	-641	-617	-436	-236	+60	+393	+363	+212	+60	-54	+60	+60	+48	+54	+78
15	X	+54	+145	+127	+36	+109	+230	+484	+756	+290	-551	-732	-720	-417	-115	+133	+327	+290	+218	+24	-54	+67	+127	0	+127	+40
16	X	0	+60	+48	+127	+109	+200	+436	+666	+206	-720	-853	-605	-339	-182	+163	+369	+424	+97	-60	+97	+12	+48	+54	+48	+17
17	X	+73	+60	-12	-67	+175	+212	+417	+544	+296	-272	-454	-538	-363	-175	+133	+212	+248	+242	+169	+48	0	+60	-12	-36	+39
18	X	-24	-60	+60	+67	+48	+157	+436	+544	+73	-290	-466	-363	-309	0	0	-48	-60	+60	+121	+60	+67	+121	+133	+60	+16
19	X	-67	-60	-97	-30	+73	+182	+605	+799	+327	-302	-575	-605	-327	-54	+109	+169	+85	-36	-54	0	-36	+48	+206	+67	+18
20	X	-60	-60	-60	-73	+169	+182	+417	+611	+133	-417	-538	-472	-363	-175	+85	+54	+24	-54	+60	-48	+60	+60	+24	-127	-13
21		+206	+54	+48	+60	+67	+248	+182	+581	+508	-121	-442	-629	-127	-91	+133	+212	+67	+60	-54	+60	+248	-54	-115	+12	+46
22		+48	+67	+91	+157	+151	+218	+551	+889	-339	-405	-1156	-823	-121	+169	+115	+157	+605	+490	+460	+272	+823	+254	-157	+327	+118
23		+67	+393	-544	+1028	+103	+272	+454	+968	+569	-248	-363	-430	-121	+30	+121	+54	+67	+24	+109	+121	+37	+48	+48	+60	+122
24		+67	+145	+121	+97	+242	+393	+484	+732	+357	-109	-538	-569	-484	-387	-163	-302	+780	+901	+121	+339	+248	+30	+54	+97	+111
25		-121	-182	+212	+242	+242	+387	+659	+726	+48	-538	-732	-424	-357	-175	+48	+230	+309	+296	+127	+182	+127	+127	..	..	..
26		..	..	+182	+182	+248	+182	+430	+659	+484	+42	-535	-520	-302	0	-48	+230	+230	+151	+60	0	+67	0	+73	+67	..
27		+97	+60	-60	+230	+133	+309	+678	+968	+424	-472	-786	-774	-696	-780	-266	+127	+302	+175	+60	+60	+67	+97	+115	+85	+6
28		+30	+60	+109	+121	+121	+230	+411	+738	+230	-212	-786	-1065	-659	-85	+357	+212	+339	+436	+424	+290	-60	+73	+121	+266	+71
29		-145	+182	+230	+157	+121	+254	+672	+968	+611	-127	-514	-672	-430	-36	+145	+133	+218	+411	+224	+30	+659	+302	-302	-121	+124
30	X	-18	-60	-393	+36	+296	+169	+484	+569	+375	-91	-605	-605	-581	-182	-12	+327	+302	+333	+60	+242	+127	+91	-54	+218	+45
31		+121	-60	-73	-12	-175	+157	+375	+544	+218	-73	-242	-363	-363	-127	+127	+182	+242	+242	-151	+54	+121	+321	+30	+91	+49
MEANS ALL DAYS		-11	+52	+15	+121	+136	+241	+516	+697	+250	-331	-623	-584	-376	-143	+88	+192	+295	+278	+114	+61	+110	+823	+0	+92	+51
MEANS 10 DAYS		+22	+11	-105	+64	+164	+214	+489	+627	+233	-331	-558	-498	-331	-123	+86	+195	+203	+162	+36	+24	+71	+58	+84	+76	+41

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-422	0	-214	-86	+183	+183	+269	+672	+489	+318	-446	-330	-422	+199	+403	+306	+733	+428	+587	+275	+110	-177	-403	-31	+109						
2		-141	-86	+61	-31	-61	+208	+293	+458	+483	+324	-61	-397	-214	+98	-79	+312	+574	+428	+159	-299	-116	+6	+37	+122	+87						
3		+189	+67	+61	+110	+49	+128	+171	+122	+49	0	-299	-440	-122	+128	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	+159	+86	+306	+67	+373	-86	+342	+360	+122	+397	+910	+397	+6	-403	+483	..
5	X	-251	+244	+86	+110	+171	+116	+373	+177	+110	-31	-122	-226	+336	+128	+275	+360	+354	+208	+202	+330	+147	+312	+189	+67	+153						
6	X	+116	+49	+189	+267	+299	+251	+360	+617	+306	+122	-61	+251	+360	+306	+666	+489	+642	+306	+318	+153	+299	-128	+709	+306	+300						
7		-183	+660	+501	+403	+257	+244	+458	+916	+434	-134	+61	-269	+49	+1008	+1161	+1558	+373	+251	+110	+177	+49	+232	+183	-67	+351						
8		+98	+110	-61	+299	+244	+379	+306	+495	+153	-244	-244	+519	+617	+397	+666	+519	+556	+800	+428	+128	+110	+49	+177	+153	+278						
9		+122	+49	+183	+128	+171	+189	+354	+678	+373	-153	-37	-61	+232	+880	+501	+1100	+367	+128	+61	+67	-525	+183	+67	+440	+229						
10		+196	+86	+67	-92	+67	+189	+397	+275	+98	-244	-116	-18	+434	+1528	+862	+403	+440	+580	+312	+61	-269	+86	+92	+330	+240						
11		-122	-128	+599	+739	+1161	+1185	+532	+715	+525	+122	+214	-464	-116	+110	+98	+910	+342	+214	+73	-128	-147	..	..	..	..		
12		..	..	..	..	..	..	..	..	-110	-354	-428	-495	-238	+238	+648	+727	+574	+525	+244	+98	+122	+128	+183	+415	..
13		-147	+189	+275	+189	+177	+189	+617	+678	+312	-128	-312	-299	-141	+12	+122	+257	+299	+269	+67	+31	+49	-43	+79	+73	+127						
14	X	+110	+67	+244	+306	+257	+196	+562	+642	+354	-73	-159	-49	+61	+122	+171	+312	+232	+134	+73	+92	+98	+153	+67	+92	+169						
15	X	+128	+196	+189	+122	+122	+128	+196	+623	+379	-61	-116	-251	-122	+55	+134	+232	+360	+183	-31	-24	+122	+183	+49	+86	+120						
16	X	+61	+61	+73	+122	+73	+73	+244	+489	+232	-367	-422	+122	+110	+122	+177	+293	+495	+128	+61	+196	+86	+183	+275	+183	+128						
17	X	+244	+147	+92	+183	+293	+244	+312	+556	+342	+153	-49	-183	+49	+183	+318	+306	+312	+251	+147	0	-24	+61	-55	-12	+161						
18	X	0	-49	+61	+110	+55	+61	+189	+336	0	-251	-61	+128	+67	+306	+244	+110	-31	-49	+67	+122	+189	+183	+122	+110	+84						
19	X	-49	0	-55	-61	+61	+147	+373	+635	+525	+73	-128	-244	-128	+306	+251	+196	+79	-122	-128	-55	-37	+61	+189	+55	+81						
20	X	-55	-31	0	+189	+232	+189	+336	+550	+397	+49	+86	+128	-92	-86	+171	+79	+61	-116	0	-61	+79	+92	+24	+55	+149						
21		+92	+122	+67	+61	+128	+244	-12	+428	+660	+367	+807	+183	+220	-49	+183	+238	+153	+1039	+293	+183	+293	+79	+12	+67	+258						
22		+61	+110	+67	+61	+128	+116	+299	+587	-110	+98	-697	-379	+299	+330	+269	+336	+342	+550	+208	+147	+611	+122	-385	+397	+149						
23		-104	+269	-758	+770	+183	+128	+159	-611	+452	+134	+79	-37	-61	-122	+147	+73	+403	+61	-12	+18	+67	+67	0	-31	+53						
24		-67	-61	+55	-67	+61	+189	+189	+519	+330	+128	-214	-165	-226	-61	+244	0	+733	+678	+122	+251	+122	+37	+61	-37	+118						
25		-61	+49	+61	+86	+116	+183	+397	+550	+232	+134	-306	-67	-153	-122	+257	+92	+122	+122	+92	+73	-18	+24	..	..	..			
26		..	..	+684	+92	+147	+86	+122	+342	+354	+244	-61	-171	-61	+61	-55	+171	+110	+49	-24	-73	+67	-18	+61	+61	..				
27		+37	-37	-92	+171	+67	+128	+336	+562	+342	+18	-244	-293	-428	-122	-86	+116	+183	+86	+55	+55	+61	+86	+122	+61	+49						
28		+24	-24	+55	+67	+61	+147	+232	+391	+220	+147	-153	-697	-367	+275	+495	+153	+92	+244	+342	+110	-183	+49	-12	+226	+79						
29		-452	+98	+208	+55	+86	+110	+232	+642	+489	+24	-110	-67	-134	+232	+189	+61	+147	+397	+183	-61	+489	-31	0	-67	+113						
30	X	+31	-12	-281	+67	+251	+37	+244	+312	+318	+49	-189	-134	-214	-43	-61	-61	-73	-12	-61	-55	-55	-116	-177	-61	-12						
31		-67	-116	-116	-116	-110	-122	-73	..	..	..	..	..	..	..	..	..	..	+128	-128	0	+110	+299	+110	+183	..
MEANS ALL DAYS		-23	+90	+42	+139	+179	+170	+305	+484	+320	+13	-121	-115	+12	+250	+309	+323	+326	+285	+148	+77	+74	+72	+59	+105	+146						
MEANS 10 DAYS		+34	+67	+60	+142	+181	+144	+319	+494	+296	-34	-122	-46	+43	+140	+235	+232	+243	+91	+65	+70	+90	+98	+129	+88	+128						

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 215

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17° 8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+ 92	-214	+244	+159	+ 98	+152	+518	+762	+354	+ 61	-177	-244	-195	-244	-256	-159	+ 98	+128	+ 24	+ 61	0	+ 61	+ 61	- 49	+ 56						
2		+110	0	0	-128	- 73	+110	+372	+616	+433	- 49	-336	-396	-354	-305	- 49	+146	+104	+128	+ 67	+159	+110	+311	+244	+421	+ 68						
3		+537	..	..	..	..	..	..	..	+220	0	-299	-336	-305	-189	- 55	+214	+299	+ 49	0	+ 61	- 61	- 92	- 30	+ 73	..
4		+ 92	+232	+ 61	+122	+ 49	+ 67	+305	+543	+116	-396	-177	- 55	+110	+ 61	- 49	+ 92	+146	+244	0	+189	- 49	-189	- 12	0	+ 63						
5		+ 61	- 37	+122	+189	+ 49	+ 73	+378	+1098	+128	-336	-268	-195	-195	- 98	+ 24	+ 98	+232	+293	+152	- 49	0	0	+ 24	+ 61	+ 75						
6		+122	+110	+110	+ 61	+134	+268	+488	+732	+171	-390	-549	-610	-439	-207	+146	+122	+171	-159	-110	- 67	- 37	- 73	+ 92	+396	+ 20						
7	X	+220	+116	+110	+207	- 12	+171	+561	+506	+244	-238	-884	-312	-238	- 61	+171	+110	+ 43	+ 79	+171	- 30	- 61	- 37	- 30	+ 79	+ 22						
8	X	+ 85	+281	+128	+ 49	+110	+122	+366	+433	-214	-311	-518	-482	-299	-244	+128	+220	+182	+ 49	-128	- 30	+ 49	+ 24	+ 12	+ 49	+ 20						
9		- 30	- 61	+183	+ 49	+ 73	+372	+640	+750	+244	-220	-464	-274	-250	-561	- 67	+152	+214	+293	+122	+ 61	+ 24	-232	- 61	+116	+ 45						
10	X	+ 61	+ 98	+220	+ 30	-171	+ 67	+451	+720	+329	+ 61	- 61	-311	-342	-201	-159	- 79	- 18	+110	+ 92	+323	+ 67	-244	-116	- 73	+ 36						
11		- 12	+ 37	- 18	- 67	-250	+195	+458	+830	+531	+116	- 61	-274	+305	-116	+ 30	+ 43	+ 30	+ 67	+ 30	+329	-244	-122	+134	-110	+ 78						
12		+ 98	+ 61	- 67	+128	+ 85	+122	+366	+702	+421	-372	-488	-433	-354	-250	- 37	+171	+311	+110	+ 49	+122	+561	-116	- 18	-195	+ 41						
13		- 12	+ 67	+ 79	+ 61	-146	+ 61	+476	+580	+329	-305	-488	-769	-244	-311	-195	-183	+488	+317	+ 92	+549	+988	+250	- 98	+195	+ 74						
14		+ 30	- 49	-427	- 24	-159	- 73	+201	+336	+732	+433	+232	-220	-256	- 67	+189	+494	+659	+445	- 73	+1440	+ 79	+122	+1074	+207	+222						
15		-274	-1708	+659	+329	-610	-702	-122	+525	+354	+232	+110	0	- 55	+195	-817	-268	+ 37	+220	- 85	-128	- 92	- 92	- 61	-189	-106						
16		+ 61	0	+ 43	+ 49	+ 55	+122	+274	+305	+305	+134	-244	-116	- 55	-274	-305	- 67	-128	+128	+ 73	+171	+427	-396	+ 61	- 55	+ 24						
17	X	-183	-183	+ 67	+ 49	+ 79	+183	+311	+488	+317	-244	-336	-409	-336	-177	0	+ 67	+ 49	- 24	+ 61	+250	0	0	- 18	- 43	- 1						
18	X	+134	+ 61	+ 30	+ 92	+ 85	+159	+372	+464	+366	-159	-244	-299	-354	-189	- 30	+ 61	+110	+195	+128	+189	+110	+ 92	+152	+ 98	+ 68						
19	X	- 61	+232	+ 79	+ 79	+122	+146	+305	+354	+ 49	-189	-305	-476	-433	+ 12	+171	+116	+ 61	+ 6	- 49	+ 61	- 55	+ 37	- 30	+110	+ 14						
20	X	- 24	-116	+ 73	+ 61	+ 67	+232	+366	+586	+366	+ 61	-214	-683	-476	-177	+ 61	+ 92	+ 49	- 55	- 49	+ 30	0	+ 55	+ 49	+110	+ 19						
21		+ 85	+189	+ 73	+ 98	+122	+244	+482	+464	+122	- 98	-580	-622	-525	- 73	+134	+390	+268	- 61	- 49	+ 61	+ 67	0	-159	+220	+ 36						
22		+512	-122	+756	+104	-104	+122	+274	+354	+183	-396	-366	-488	-366	- 92	+ 24	+122	+ 61	- 73	- 73	+110	+ 49	-451	-116	+360	+ 16						
23	X	+195	- 49	+122	+122	+ 67	+183	+268	+207	+366	+110	-238	-488	-317	-183	- 73	+305	+128	+ 67	- 30	+ 61	+ 49	- 49	- 37	+ 31	+ 68						
24	X	0	+ 49	+ 85	+ 61	+ 61	+122	+268	+427	+336	+293	- 18	-573	-665	-372	+ 61	+214	+171	+122	+122	+116	+ 92	+ 12	0	- 12	+ 40						
25	X	+ 18	+ 61	+ 61	- 61	+ 67	+ 24	+274	+702	+555	+189	-116	-427	-488	-549	-244	+207	+ 79	+110	+183	+427	+ 61	+122	+ 37	- 18	+ 53						
26		-336	-250	+1348	-946	+244	+933	-281	+610	+878	+1037	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27		..	..	..	..	..	..	..	+549	+195	+366	- 37	-598	-531	-317	-195	+610	+128	- 24	+178	+403	+488	+159	+214	-250	..
28		-244	-214	-214	-195	-183	- 73	+384	+372	+445	+189	-195	-244	-293	-183	-116	- 49	+ 49	- 55	+ 73	- 98	-116	+ 67	+634	-622	- 37						
29		+433	-183	- 49	-476	-152	+116	+177	+647	+177	+342	- 67	- 61	-140	-244	-183	-128	-122	-110	- 49	- 49	- 61	+ 67	+ 12	- 61	- 7						
30		- 73	- 12	- 61	+ 73	-360	+189	+244	+512	+433	+366	0	+458	-250	-311	-122	+ 92	+659	- 85	+268	+293	+2306	-220	-781	-220	+142						
MEANS		+ 55	- 50	+ 91	+ 45	- 33	+103	+350	+556	+319	- 41	-261	-341	-278	-193	- 58	+ 88	+153	+ 86	+ 37	+169	+160	- 37	+ 38	+ 27	+ 41						
MEANS		+ 44	+ 55	+ 98	+ 69	+ 48	+141	+354	+489	+314	- 43	-293	+466	-395	-214	+ 9	+131	+ 86	+ 50	+ 50	+140	+ 31	+ 1	+ 1	+ 26	+ 30						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° 5' N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+192	-70	+383	+364	+313	+320	+371	+569	+441	+288	+198	+128	+64	+70	-77	-128	+64	+70	-26	+64	+45	+77	+64	-51	+156					
2		+128	+89	+64	-96	+19	+179	+262	+435	+371	+153	-51	-64	-19	-70	+134	+192	+256	+134	+70	+32	+96	+236	+320	+332	+133					
3		+243	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6		..	..	..	..	..	..	..	..	..	..	..	-256	-243	-134	+64	-77	+166	-147	-51	-70	+19	+128	+134	+447	..
7	X	+320	+166	+128	+70	+249	+550	+677	+581	+377	+198	-268	-134	+166	+217	+268	+83	+89	+13	+243	+115	-64	-77	-51	+70	+166					
8	X	-70	+332	-26	-26	+198	+128	+256	+307	+256	+64	-128	-128	-19	-134	+83	+96	+70	+64	-64	+26	+64	+58	+38	+64	+63					
9		0	-179	+121	+64	+115	+320	+351	+409	+320	+255	-115	+115	+102	-371	-13	+134	+173	+383	+115	+51	0	-230	0	+160	+95					
10	X	+64	+51	+198	+64	-64	+121	+185	+511	+454	+396	+243	-58	-128	+89	-13	-102	-115	+45	+115	+211	+141	-51	-64	+89	+99					
11		+192	+243	+179	+64	+141	+179	+371	+652	+639	+307	+313	+224	+64	+89	+121	-38	+115	+102	+51	+326	-192	-64	-109	-224	+165					
12		+192	+134	-13	+128	+166	+141	+192	+550	+518	+89	-51	-70	+26	-89	-13	+70	+243	+45	+89	+224	+256	-51	+224	-70	+122					
13		+38	-58	+89	-51	-160	-58	+160	+383	+390	+58	-115	-639	+281	+160	+230	+121	+550	+134	-70	+754	+1585	+198	-179	-70	+155					
14		-13	-64	-281	-32	-121	-64	+185	+115	+792	+1342	+550	+160	+121	+243	+351	+403	+837	+435	-64	+728	+230	+415	+690	+332	+304					
15		-211	-1150	+70	-64	-256	-70	-358	+537	+613	+115	+147	+550	+204	+307	-856	-256	-192	-32	+70	+96	+115	-38	-96	-204	-40					
16		+13	-32	-70	+38	-13	0	+96	+256	+262	+224	+77	+288	+383	-198	-326	+166	-230	+64	+13	+121	+51	-415	-32	-13	+30					
17	X	-160	-115	-51	-38	+51	+134	+268	+390	+262	-134	-249	-185	-102	+38	0	+64	+121	+89	+70	+288	+13	-32	-13	-134	+24					
18	X	+96	+51	+13	+77	+83	+83	+268	+346	+294	+58	-70	-160	-179	-121	-64	-51	+89	+128	-26	+64	-6	+70	-13	-51	+41					
19	X	-115	+192	+64	+51	+51	+109	+166	+160	+38	-51	-166	-211	-262	+115	+179	+128	+230	+38	-70	+70	-64	+38	-64	+134	+32					
20	X	-115	-198	+64	+51	+64	+294	+204	+511	+479	+320	+77	-326	-262	-121	-58	-64	-58	+32	-64	-32	0	+77	+58	+96	+43					
21		+89	-134	-64	+89	+96	+192	+320	+262	+243	+249	-185	-268	-288	+179	+179	+441	+198	-70	-185	+26	+13	-243	-256	+102	+41					
22		+684	-345	+415	+345	+19	+134	+192	+294	+268	-26	-64	-166	-160	-64	-64	+51	+51	-64	-77	+179	-13	-581	-64	+498	+60					
23	X	+51	-64	+51	+64	+38	+134	+134	+128	+300	+179	+102	-38	+19	-77	-128	+179	0	+58	-121	+51	+38	0	0	+46	+78					
24	X	0	+19	+64	+26	+64	+38	+115	+313	+371	+288	-58	-230	-58	-58	+64	+64	+83	+102	+51	+51	+64	+13	+64	0	+78					
25	X	+13	+13	+13	-32	0	+64	+160	+364	+383	+313	+198	+70	-96	-345	-96	+198	-13	+64	+198	+153	+121	+121	+70	0	+81					
26		-754	-288	+1022	-345	+275	+1022	-332	+185	+927	+1035	+767	+498	+230	+243	-262	+96	+64	-249	-77	+102	+249	-102	-371	-64	+161					
27		-192	-160	+64	+198	+96	+102	-70	+345	+179	+320	+256	+64	-70	-192	-198	+990	-268	+345	+1534	+1757	-518	+256	-89	-185	+190					
28		-217	-256	-134	-89	-134	-179	+198	+192	+166	+32	-147	-26	-58	+115	+38	+58	+77	-51	+32	-115	-77	+96	+709	-435	-9					
29		-70	-77	-64	-262	-217	+13	+141	+326	+332	+256	+134	+192	+70	+26	-38	-192	-192	-192	-89	-121	-77	+64	+89	-64	0					
30		-128	-51	-64	-128	-313	+70	+115	+671	+134	+326	+192	+856	+383	-64	+58	+134	+128	-70	+89	+160	+1502	+1099	-728	-537	+160					
MEANS ALL DAYS		+1	-75	+86	+20	+29	+152	+178	+377	+377	+259	+74	+24	+9	-1	-19	+109	+91	+62	+76	+207	+137	+36	+16	-9	+92					
MEANS 10 DAYS		+8	+45	+52	+31	+73	+166	+243	+361	+321	+171	+3	-123	-109	-40	+24	+60	+50	+63	+33	+100	+31	+22	+2	+27	+67					
		* = 10 LEAST DISTURBED DAYS																													

TABLE 217

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LINE OM		LENGTH IN KMS				58.4				DIRECTION N 17° 8 E				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		+ 80	+ 86	+153	-423	-184	+178	+190	+147	- 49	- 98	- 37	0	- 92	+ 67	- 67	+196	-147	+ 98	-110	+166	- 55	+ 86	+172	-110	+ 10
2		-245	- 55	- 80	-215	0	+313	+331	+368	-178	-196	-110	-239	- 37	+123	+178	+159	+ 61	-153	+172	+ 18	-184	+172	-368	+276	+ 5
3		+ 49	+ 80	-110	-276	+129	+153	+251	+306	+613	+515	-313	-196	-172	- 61	- 86	+ 37	- 86	+ 25	- 25	- 98	- 43	+123	-129	-129	+ 23
4		- 67	+ 67	- 67	+ 31	-356	-215	+306	+503	+456	-110	-460	-294	-233	- 74	+129	+172	- 55	+ 25	+ 61	+ 12	- 18	0	+ 18	+ 61	- 4
5	X	+ 49	+ 61	+ 49	+ 49	- 12	+147	+368	+441	+337	0	- 74	-215	-196	- 31	+ 74	- 12	-123	- 61	+ 61	+ 25	+ 61	+116	+172	- 74	+ 50
6		+ 37	+ 31	+ 67	+ 25	+129	+110	- 49	+331	+454	- 49	-190	-294	-172	-110	+ 80	+ 92	+123	- 12	0	0	+ 31	+184	+343	- 18	+ 48
7		+785	+497	+196	-362	-717	+215	+490	+687	+613	+294	+509	+123	+ 98	-135	+417	-300	-257	-123	+184	- 98	+337	+723	+1073	+140	+266
8		-766	-398	- 86	-429	-619	+723	+208	+110	+ 18	-245	-343	-282	- 61	- 67	+190	+ 98	+153	+245	+ 31	-239	0	0	-116	- 49	- 80
9		+ 61	-662	+172	+172	+ 18	+ 67	+264	- 12	-116	-208	-356	-362	-190	+ 67	+153	+159	+ 74	+233	+147	-123	+331	- 67	-147	-110	- 18
10	X	-123	- 74	- 55	- 43	+ 61	+110	+497	+ 61	+ 61	-153	-423	-184	+ 61	+ 61	- 74	- 74	0	+233	+129	- 49	+215	+ 86	+ 67	- 98	+ 12
11	X	+ 98	+ 61	- 37	- 12	-374	-460	+368	+110	+ 49	- 61	-184	-435	-196	- 25	+135	+276	+208	+ 86	+ 49	+ 61	+ 61	0	- 61	-159	- 18
12	X	- 67	0	0	- 55	+ 61	+ 67	+319	+368	+313	- 74	-484	-668	-417	-147	+ 61	+116	+ 67	+ 61	+ 92	+ 67	+ 98	+ 61	+ 61	- 67	- 1
13	X	+ 18	- 74	- 37	- 31	- 25	+ 98	+319	+460	+392	+184	-294	-374	-245	-282	- 49	- 98	- 55	0	+ 12	+ 49	0	+ 92	+ 61	- 49	+ 3
14	X	- 25	- 25	- 37	- 61	- 31	+ 92	+392	+539	+429	+ 49	-300	-306	-319	-233	-184	-129	- 61	+ 61	+ 61	+ 37	+ 61	+ 49	+ 92	+ 67	+ 9
15	X	+ 67	+ 74	+ 12	+ 92	- 12	-184	+233	+368	+208	+123	-208	-392	-215	-123	- 55	0	+ 61	+ 61	+129	+190	+ 98	+ 67	+ 67	+141	+ 33
16		0	- 61	+110	-159	+ 67	+245	- 74	-159	+ 49	- 98	+ 49	+ 61	- 61	+270	+319	+147	+306	+110	- 49	0	+ 31	+ 49	0	0	+ 48
17	X	+ 61	+110	+239	- 31	- 98	+ 86	+245	+221	- 55	-282	-423	-398	-184	- 49	+ 61	+ 61	- 12	- 92	- 61	+ 92	0	+ 12	- 25	+ 49	- 20
18		+ 61	+ 80	+ 80	+ 98	- 25	+ 55	+245	+466	+215	-153	-270	-374	-423	-123	+ 80	+116	- 25	- 61	+147	+159	+ 74	+147	+245	-264	+ 23
19		- 31	+116	+ 49	+ 61	+ 98	-104	+178	+497	+178	- 67	-245	-276	-190	-147	+245	+343	- 37	+ 55	- 61	0	- 12	+123	-368	+736	+ 48
20		+251	+ 49	+ 61	+ 86	-110	- 61	+270	+368	+270	+306	-362	-362	- 92	-110	+116	0	+208	- 12	+172	+ 61	+ 92	+ 12	- 92	+123	+ 52
21		-116	+ 55	+ 80	+ 67	- 98	+ 61	+202	+129	+208	+ 86	-282	-300	-135	-123	+ 49	+208	0	- 31	+ 49	+ 61	+ 61	0	- 12	+172	+ 16
22		+147	+ 49	- 25	-129	+ 86	+ 49	+245	+429	+ 49	-178	-429	-460	-368	+ 12	+ 86	+123	+184	+110	+172	- 12	- 55	+ 25	- 92	- 12	0
23		+ 86	+233	- 25	- 31	-306	+306	+417	+405	-178	+ 86	+196	-135	-429	- 25	- 61	+343	+ 31	+123	0	+ 67	+239	+ 61	-123	- 37	+ 52
24		-153	-313	- 86	+300	-116	+527	+257	+932	- 18	- 67	+ 61	+ 61	- 55	+135	- 37	-319	+742	+251	+374	+582	0	-178	- 49	- 49	+116
25		-196	+184	+190	-362	+913	-140	+570	+674	+270	+251	- 67	-270	-300	- 67	+282	+343	-178	+129	+374	+ 86	+294	+ 74	-110	-386	+ 65
26		+190	-123	- 37	-356	+245	-343	+ 61	+288	+362	+423	-116	+208	- 92	+233	+343	-362	- 86	+337	+257	+466	-116	+362	+454	-110	+104
27		-736	-368	+398	-116	-435	-184	+797	+453	+306	+215	-325	-172	-159	-153	+ 25	+147	+306	+453	-190	+ 92	+257	-245	-141	- 74	+ 6
28		- 49	+ 49	-196	+ 37	- 49	-693	+123	+1048	+809	+349	+ 49	- 61	-166	-435	-190	+ 43	+129	+ 67	+184	0	-110	0	+ 86	-325	+ 29
29		0	+123	- 55	-190	+ 61	+ 98	+239	+356	+478	+276	+ 67	0	-337	-490	-178	+ 67	+ 98	0	+294	+368	-159	-116	+ 31	+ 98	+ 47
30	X	0	+ 31	+129	+ 80	0	+ 55	+ 55	+674	+490	+147	- 67	-343	-435	-362	-190	-178	- 18	+ 31	+110	+ 74	0	+ 61	+ 61	+ 37	+ 18
31	X	+ 49	+ 12	+ 55	+ 31	0	+ 61	+251	+417	+294	0	-153	- 67	-233	-184	-123	-184	- 55	+ 31	+129	+129	+129	+ 61	+ 49	0	+ 29
MEANS ALL DAYS		- 16	- 3	+ 36	- 70	- 55	+ 14	+276	+387	+237	+ 41	-180	-226	-195	- 83	+ 56	+ 51	+ 50	+ 74	+ 93	+ 72	+ 55	+ 69	+ 39	+ 29	+ 31
MEANS 10 DAYS		+ 13	+ 18	+ 32	+ 1	- 43	+ 7	+305	+366	+252	- 7	-261	-338	-238	-138	- 34	- 22	+ 1	+ 41	+ 71	+ 68	+ 72	+ 60	+ 54	- 2	+ 12

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1938

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

OCTOBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD					LINE ON					LENGTH IN KMS					93.9					DIRECTION E 0° 5 N					MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24		
1		+128	+71	+192	-385	-71	+109	0	-64	-122	-115	+71	+218	+128	+327	+77	+179	-128	+128	-147	+77	-186	-51	+327	-141	+26	
2		-231	-77	-64	-256	-77	+135	+263	+199	-71	-192	+26	+71	+135	+288	+320	+256	+167	-128	-167	-154	-160	+135	-205	+199	+17	
3		-13	+64	-51	-205	+96	+64	+64	+77	+333	+712	-167	+103	+314	+327	+218	-90	0	+26	-103	-32	+51	+90	-128	-186	+65	
4		-71	+19	-256	0	+13	-205	+71	+135	+320	+58	-115	+122	-64	+64	+192	+244	-19	-64	+32	0	0	+51	+64	+27		
5	X	0	+13	0	-51	+64	+96	+224	+244	+224	+192	+141	+51	-51	+71	+64	-64	-141	-224	-128	-64	+51	+64	+103	0	+37	
6		0	-71	-13	-77	+160	+77	-71	+141	+192	+115	+154	+115	+64	+83	+179	+109	+64	-64	-64	-13	+128	+199	+333	-90	+69	
7		+487	+320	+128	-603	+154	+474	+904	+865	+859	+712	+904	+449	+199	-128	+218	-615	+327	+141	-179	-513	+769	+474	+910	+436	+341	
8		-731	-487	-192	-192	-679	+500	+13	+135	+96	+128	-179	-58	+83	-90	+147	+192	+199	+333	-58	-122	+51	+64	-64	-71	-41	
9		-115	-103	-186	+103	+64	-64	+103	+71	+128	-58	-192	-135	+38	+282	+320	-38	0	+199	+147	-64	+250	+128	-71	-13	+33	
10	X	-71	-64	-32	-26	+96	+64	+474	+308	+199	+71	-19	+205	+295	+128	-122	-128	-26	+308	+186	-32	+288	+205	-51	-122	+89	
11	X	+263	+128	+32	-38	-38	-391	+135	+77	+128	+199	+205	+103	-51	+51	+90	+205	+179	+115	+96	+115	+122	+90	+32	-64	+74	
12	X	-96	+128	+71	-71	+77	+26	+179	+256	+282	+244	-51	-141	-71	+71	+77	-64	-58	+19	+77	+71	+128	+96	+122	+115	+62	
13	X	+51	-71	-51	-19	-51	+64	+96	+314	+269	+320	+115	+128	+179	-96	-32	-199	-141	+51	-51	+51	+51	+58	+103	+71	+50	
14	X	+38	+64	0	-58	-51	+51	+192	+269	+359	+231	+64	+64	-38	-96	-135	-186	-186	+32	+71	0	+64	+51	+135	+71	+42	
15	X	-64	+71	+64	+64	+96	-103	-13	+128	+192	+135	+26	-77	+71	+64	+128	+122	+160	+128	+199	+186	+77	-26	+64	+205	+79	
16		0	-96	0	-192	-90	+135	+199	-224	0	+32	+122	+224	+128	+410	+436	+365	+513	+19	-192	-51	+64	0	-58	-51	+71	
17	X	+38	+51	-64	+90	0	0	+256	+179	-19	0	0	-32	-58	+115	+135	+64	-58	0	+51	+103	+51	+64	+26	+32	+43	
18		+64	+71	+115	+135	+58	+64	+128	+269	+64	0	+64	-71	-122	+32	+122	+179	+71	+51	+186	+308	-19	+160	-77	-122	+72	
19		-19	+71	0	-26	+58	-147	+90	+263	+192	+32	-58	-38	-71	-26	+250	+449	+115	-32	-83	0	+51	+224	-205	+474	+65	
20		+199	+71	+51	+13	-64	-58	+51	+276	+295	-90	-115	-51	+224	-90	+71	+179	+224	+51	+115	+19	+96	-64	-103	+135	+60	
21		-71	+19	+51	+71	-19	+109	+71	+51	+179	+288	+115	-77	-32	-96	-64	+135	+64	+128	0	+51	0	+19	-38	0	+40	
22		+186	+51	0	-179	+71	-103	+103	+308	+64	+19	-96	-103	-154	+192	+64	-83	+128	+128	+179	-38	-58	-26	-45	-103	+21	
23		+135	+77	-38	+115	-256	+19	+327	+192	+256	+295	+436	+263	-154	+96	-135	+263	-256	+64	-179	+26	+192	+51	-51	0	+72	
24		-141	-256	-115	-64	-320	+500	+269	+1013	+256	+135	+179	+199	+64	+314	-128	+308	+481	+487	+51	-192	+256	-45	-135	-64	+127	
25		-327	-256	+269	-410	+577	-442	+256	+288	+391	+500	+250	+103	-58	+128	+320	+135	-295	+128	+77	+83	+436	+212	-154	-205	+84	
26		+199	-71	-256	-173	-141	-167	+320	-308	+423	+699	-26	+320	+167	+410	+423	-660	-13	+282	+372	-77	+51	+308	+487	-58	+105	
27		-179	-513	+135	-135	-19	-391	+513	+397	+308	+372	-51	+179	-90	-128	-58	+199	+481	+397	-179	+13	-83	-135	0	+58	+45	
28		-90	-147	+122	-141	-51	-115	-224	+500	+756	+519	+372	+256	+256	-417	-308	-83	+45	-19	+58	-263	-71	+51	+64	-231	+35	
29		+26	+115	-64	-122	-58	-58	+77	+256	+288	+77	+372	+128	+154	-199	-135	-51	-64	-64	+308	+192	-282	-192	-51	+77	+30	
30	X	0	0	+58	+71	-51	0	0	+320	+327	+244	+192	+90	-96	-122	-192	-314	-128	0	+13	0	-96	+51	0	-32	+14	
31	X	0	-26	0	0	0	0	+122	+256	+256	+179	+128	+205	+51	-58	-122	-154	-58	+58	+83	+186	+141	+13	-38	-58	+48	
MEANS ALL DAYS		-13	-27	-3	-89	-15	+8	+167	+232	+239	+195	+92	+91	+46	+62	+78	+44	+53	+86	+25	-4	+78	+75	+42	+11	+61	
MEANS 10 DAYS		+16	+29	+8	-4	+14	-19	+166	+235	+222	+182	+80	+60	+23	+13	-11	-72	-46	+49	+60	+62	+88	+67	+50	+22	+54	

* = 10 LEAST DISTURBED DAYS

TABLE 219

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LENGTH IN KMS 58.4										DIRECTION N 17° 8' E										
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1		- 85	- 49	- 61	- 30	+ 61	- 37	+518	+ 55	+365	+ 61	- 61	-225	-359	-244	- 85	-128	- 12	+ 61	- 12	- 30	- 30	+ 61	+ 61	+ 30	- 7						
2		- 55	- 55	+ 12	+ 97	+128	+ 37	+146	+371	+ 61	-646	- 61	-177	-195	-195	-128	+ 61	- 67	+ 30	+ 49	+ 18	- 24	- 18	+ 12	+ 24	- 24						
3	X	+ 49	+ 67	+110	0	+ 61	+110	+353	+365	+ 67	0	-177	-298	-487	-250	-128	- 97	+ 61	0	+ 61	+ 30	+ 49	+ 55	- 61	+122	- 2						
4	X	- 85	0	- 24	0	- 12	+ 67	+158	+365	+183	-146	-317	-298	-292	- 24	+177	+304	+116	+ 67	+ 61	+ 67	+ 49	- 37	- 24	- 12	+ 14						
5	X	- 30	- 49	+ 49	+ 49	0	+ 61	+292	+579	+432	+122	-311	-438	-438	-256	- 30	+ 61	+ 85	+ 97	+128	+ 55	+ 37	+171	+ 67	+ 61	+ 33						
6	X	- 49	0	- 67	+ 73	+ 49	- 49	+274	+487	+311	+ 37	- 55	-244	-371	-183	-158	+ 49	+116	+ 67	+ 61	+ 61	+ 73	+ 12	+ 61	+171	+ 30						
7		- 85	- 61	- 49	+110	- 18	0	+171	+365	+371	+ 55	-250	-457	-585	-396	+ 67	+152	+128	+250	+195	+171	+195	+146	-365	+244	+ 15						
8		+164	- 73	+183	+274	-250	+146	-126	+390	+195	- 37	+311	- 85	-146	-329	+122	+311	+457	+475	+639	+183	+311	+238	-146	- 6	+133						
9		+183	- 67	-238	+158	-639	- 97	- 85	+ 79	+755	+177	+365	+ 49	-183	-201	-274	-231	+122	+493	+ 43	+244	-128	+ 67	- 91	- 73	+ 18						
10		-122	-177	-128	- 67	- 73	0	+177	+268	+292	+128	- 49	-359	-536	-280	-177	+ 61	+ 61	+ 73	+110	+116	- 61	- 37	0	- 67	- 35						
11	X	- 79	-128	-110	- 97	- 73	0	+183	+359	+292	+177	-183	-256	-481	-250	-158	- 67	+177	+122	+122	+ 55	- 37	0	- 61	- 61	- 23						
12	X	- 73	- 67	- 49	- 55	- 61	0	+189	+426	+365	+213	+ 61	-256	-493	-378	-244	-171	- 61	+ 55	+ 61	+110	+ 85	+ 61	+ 18	+122	- 6						
13	X	+ 61	+ 18	- 55	- 49	- 24	+ 18	+152	+493	+536	+432	+183	-359	-682	-554	-341	-128	- 79	+ 49	- 67	+ 37	+ 67	+ 61	+ 49	- 49	- 10						
14		- 67	- 30	- 61	0	+ 49	+ 61	+171	+493	+432	+311	-128	-292	-414	+ 85	-292	+ 67	+244	+225	0	+104	+116	+ 61	+ 49	+ 73	+ 52						
15		- 61	-177	- 49	-152	- 67	- 49	+ 91	+359	+311	+110	- 97	-298	-542	-311	+ 61	-311	- 43	+110	+128	+128	0	0	- 49	- 61	- 40						
16		+ 73	+ 49	+158	+ 43	-134	+ 49	+104	+298	+378	+238	-231	-426	-524	-359	-274	- 85	+ 24	0	+122	+ 97	+189	+122	+ 55	-134	- 7						
17		- 49	- 73	+244	-274	+ 79	+116	+171	+883	-901	+ 55	+585	+171	+110	+44	-219	+152	-177	+ 30	+158	+ 37	+122	+164	+110	-463	+ 53						
18		+ 49	- 91	+116	-329	- 73	+280	+ 61	+304	+256	+128	- 55	-304	-183	- 61	0	-171	- 85	+128	+ 67	+ 67	-256	- 91	+ 49	- 61	- 11						
19		-122	-183	+ 49	-536	+292	+195	+189	+335	+371	+304	+ 12	-280	-341	-365	-152	- 55	- 55	0	0	+ 12	+ 30	-158	+ 24	+122	- 13						
20		- 61	-292	+122	+183	+244	- 49	-134	+ 18	+195	+ 61	+ 55	-110	-238	- 67	-128	+ 85	0	0	- 47	-110	- 67	-116	- 49	- 12	- 22						
21		0	- 79	+426	-731	+ 85	+597	+ 67	-171	-110	+719	+548	-146	-189	- 61	+128	- 67	+128	+304	+244	+189	+487	-250	+ 85	-317	+ 79						
22		+341	+ 49	- 61	- 67	- 49	- 49	-122	- 55	+304	+371	+ 61	-177	-189	-116	- 24	+ 73	+122	+225	+177	+146	+183	-177	-177	+110	+ 37						
23		-609	- 79	+ 49	- 79	- 37	- 67	+158	+171	+ 55	+353	+110	- 91	-274	-219	+244	- 85	0	+ 67	+ 61	+158	-110	+ 30	+213	+171	+ 8						
24		-268	- 97	-164	+207	- 85	- 73	- 61	-152	+396	+706	+110	-359	- 24	+128	+128	+201	-219	+110	+ 61	+207	+ 67	- 73	-256	+ 30	+ 22						
25		- 67	- 73	-134	-463	+244	-189	-128	+274	+311	+ 85	-116	- 73	- 61	-140	- 37	+ 61	- 61	- 55	+219	+639	-250	- 61	+ 61	-116	- 5						
26		+749	-365	-122	+ 24	-719	+ 30	+317	+231	+146	+311	+ 97	-304	+ 61	-207	-164	-158	- 30	+183	0	+ 55	+128	-262	0	0	0						
27	X	- 49	-128	- 67	-207	-128	+177	+110	+195	+274	+ 91	+ 12	-116	-256	-238	-219	+ 30	- 30	+ 49	+ 97	+122	+ 61	+ 97	+152	-177	- 6						
28		- 61	-122	-280	+ 67	+ 61	+ 91	+171	+ 67	+274	+219	+122	-256	-426	-231	-128	- 61	- 12	+ 49	+110	+110	+116	+244	- 55	- 49	+ 1						
29	X	-171	- 61	-146	- 55	- 49	- 12	0	+110	+189	+244	+ 97	-231	-238	-238	-134	-244	0	+ 55	- 61	+ 49	- 24	- 12	- 49	- 55	- 43						
30	X	- 49	-128	+ 67	+ 61	+ 30	+ 73	+122	+268	+292	+ 24	- 61	-231	-335	-256	-183	- 67	+ 49	+ 30	+ 37	0	+ 37	+ 30	0	- 37	- 9						
MEANS ALL DAYS		- 21	- 84	- 9	- 62	- 37	+ 45	+123	+274	+247	+163	+ 19	-231	-310	-198	- 92	- 15	+ 32	+112	+ 94	+104	+ 44	+ 11	- 11	- 16	+ 8						
MEANS 10 DAYS		- 48	- 48	- 29	- 28	- 21	+ 44	+183	+365	+294	+119	- 75	-273	-407	-263	-142	- 33	+ 43	+ 59	+ 50	+ 59	+ 30	+ 44	+ 15	+ 8	- 2						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON LENGTH IN KMS 93.9										DIRECTION E. 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		- 83	- 70	- 90	- 64	0	0	+ 371	0	+ 256	+ 224	+ 179	+ 64	- 115	- 186	- 154	- 224	- 64	+ 64	- 64	- 51	0	+ 128	+ 115	+ 83	+ 13						
2		+ 51	+ 19	+ 32	+ 115	+ 128	+ 51	+ 64	+ 384	+ 320	- 64	+ 442	+ 384	+ 198	+ 51	- 13	+ 77	+ 19	+ 64	+ 70	+ 102	+ 115	+ 70	+ 134	+ 115	+ 122						
3	X	+ 64	+ 115	+ 64	+ 115	+ 128	+ 122	+ 307	+ 397	+ 250	+ 198	+ 198	+ 179	- 166	- 19	- 192	- 192	- 51	- 64	- 58	+ 64	- 32	+ 58	0	+ 179	+ 69						
4	X	- 64	+ 64	0	+ 64	- 134	+ 134	+ 70	+ 243	+ 346	+ 141	0	+ 32	- 192	+ 51	+ 128	+ 179	+ 64	+ 58	+ 64	+ 122	+ 64	+ 19	+ 13	+ 38	+ 63						
5	X	+ 19	- 51	0	+ 19	+ 32	+ 102	+ 256	+ 442	+ 461	+ 384	- 32	- 160	- 192	- 192	- 77	- 64	+ 51	+ 128	+ 122	- 38	+ 64	+ 269	+ 83	+ 128	+ 73						
6	X	0	+ 32	+ 51	0	- 90	- 38	+ 96	+ 262	+ 333	+ 269	+ 179	+ 58	- 186	- 198	- 256	- 77	+ 64	+ 64	+ 51	+ 70	+ 128	+ 70	+ 141	+ 230	+ 52						
7		0	- 115	+ 26	+ 58	- 70	- 58	+ 70	+ 282	+ 384	+ 243	+ 96	- 128	- 205	- 160	+ 109	+ 51	+ 64	+ 262	+ 211	+ 198	+ 243	+ 186	- 320	+ 211	+ 68						
8		+ 166	- 32	- 13	+ 70	- 390	+ 224	+ 314	+ 448	+ 390	+ 83	+ 410	+ 256	+ 262	- 128	+ 256	+ 294	+ 576	+ 58	+ 326	- 294	+ 314	+ 339	- 262	- 192	+ 145						
9		+ 160	- 64	- 314	- 51	- 378	- 326	- 134	+ 224	+ 768	+ 326	+ 691	+ 282	+ 115	- 64	- 384	- 282	+ 416	+ 448	0	- 326	- 160	- 58	- 64	- 64	+ 32						
10		- 115	- 128	- 128	- 96	- 102	- 115	+ 64	+ 243	+ 256	+ 224	+ 192	- 51	- 243	- 147	- 115	- 13	- 58	+ 32	+ 58	+ 90	- 58	+ 51	+ 83	0	- 3						
11	X	0	- 32	- 38	- 38	- 70	+ 19	+ 102	+ 282	+ 166	+ 192	+ 64	+ 141	- 102	+ 64	- 58	- 58	+ 115	0	+ 13	- 64	- 70	0	0	+ 26	+ 27						
12	X	0	0	0	0	- 13	+ 38	+ 115	+ 198	+ 256	+ 307	+ 307	+ 115	- 147	- 186	- 192	- 198	- 128	0	+ 51	+ 90	+ 64	+ 19	+ 51	+ 179	+ 39						
13	X	+ 70	+ 64	- 13	0	- 13	0	64	+ 256	+ 390	+ 474	+ 390	+ 115	- 269	- 288	- 320	- 256	- 262	- 96	- 134	0	+ 51	+ 64	+ 64	+ 38	+ 16						
14		0	0	- 64	- 32	+ 58	+ 64	+ 102	+ 294	+ 320	+ 269	+ 192	+ 307	+ 64	+ 269	- 58	+ 128	+ 358	+ 256	- 198	- 70	+ 45	+ 64	+ 70	+ 115	+ 106						
15		+ 38	- 13	+ 51	- 58	+ 64	+ 115	+ 115	+ 186	+ 250	+ 198	+ 147	0	- 141	- 96	+ 179	- 371	- 186	0	+ 77	+ 96	- 51	- 38	+ 13	+ 19	+ 25						
16		+ 122	+ 64	+ 154	+ 64	- 134	0	+ 77	+ 154	+ 358	+ 288	+ 38	- 115	- 224	- 186	- 262	- 83	+ 32	- 77	+ 141	+ 115	+ 198	+ 134	+ 51	- 160	+ 31						
17		- 122	- 115	+ 154	- 51	0	- 307	+ 410	+ 986	- 314	+ 32	+ 704	+ 416	+ 390	+ 474	- 307	0	- 346	+ 64	+ 83	+ 115	+ 179	+ 320	- 51	- 371	+ 98						
18		+ 19	- 83	- 77	- 256	- 230	+ 333	+ 64	+ 192	+ 218	+ 256	+ 333	+ 128	+ 128	- 64	0	- 166	- 122	+ 96	- 51	+ 70	- 141	- 58	- 38	+ 19	+ 24						
19		- 38	- 141	- 13	- 384	+ 26	+ 179	+ 128	+ 160	+ 307	+ 352	+ 288	+ 122	- 96	- 224	- 70	- 64	- 70	- 58	- 70	+ 115	+ 64	- 128	+ 115	- 26	+ 20						
20		0	- 230	+ 64	+ 192	+ 179	- 58	- 6	- 128	+ 77	+ 154	+ 211	+ 218	+ 26	+ 115	- 102	0	- 38	- 45	- 64	- 64	- 64	- 26	+ 64	+ 64	+ 22						
21		+ 19	- 58	+ 134	- 358	+ 64	+ 454	+ 154	- 141	+ 70	+ 518	+ 1056	+ 96	+ 64	+ 90	+ 58	- 333	- 26	+ 128	+ 179	+ 333	- 96	+ 90	+ 64	- 314	+ 94						
22		+ 410	- 64	- 19	- 102	- 186	+ 32	- 224	- 51	+ 128	+ 326	+ 134	+ 90	+ 26	- 58	+ 32	+ 90	+ 122	+ 128	+ 198	+ 179	+ 141	- 83	- 154	+ 38	+ 47						
23		- 256	- 198	- 51	- 83	- 128	- 58	- 32	+ 218	+ 19	+ 205	+ 250	+ 90	+ 51	+ 70	+ 397	- 90	- 58	0	- 58	+ 70	- 64	+ 115	+ 288	+ 192	+ 37						
24		+ 26	- 346	- 134	+ 64	- 122	- 128	- 32	- 96	+ 506	+ 826	+ 294	- 198	+ 115	+ 339	+ 307	+ 262	- 134	- 77	- 198	- 179	- 51	- 186	- 198	- 26	+ 41						
25		+ 38	- 64	- 154	- 403	+ 102	0	- 32	+ 58	+ 192	+ 339	0	+ 26	+ 115	+ 51	+ 128	+ 13	- 128	- 115	+ 307	+ 608	- 256	- 128	+ 77	- 224	+ 23						
26		+ 666	- 64	+ 51	+ 38	- 461	- 77	+ 128	+ 122	+ 282	+ 365	+ 147	- 70	+ 416	+ 58	- 51	- 314	- 64	+ 51	- 198	- 58	+ 58	- 326	+ 128	+ 51	+ 37						
27	X	- 64	- 77	0	- 77	- 128	+ 64	- 51	+ 186	+ 198	+ 128	+ 186	+ 128	+ 64	0	- 96	+ 64	- 154	- 64	- 13	+ 51	0	+ 134	+ 186	- 96	+ 24						
28		- 64	- 128	- 192	- 58	- 70	- 38	+ 102	+ 122	+ 198	+ 250	+ 320	+ 70	- 134	- 70	- 122	- 70	- 70	- 64	+ 64	+ 134	+ 128	+ 288	+ 19	- 13	+ 25						
29	X	- 122	- 51	- 122	- 96	- 64	- 51	- 70	+ 32	+ 128	+ 198	+ 186	- 19	+ 96	+ 32	+ 58	- 122	- 64	- 26	- 134	- 51	- 32	- 26	- 64	- 38	- 18						
30	X	- 51	- 141	+ 64	+ 64	+ 51	+ 64	+ 51	+ 115	+ 224	+ 64	+ 134	+ 58	- 96	- 134	- 166	- 102	- 58	- 38	0	0	+ 51	+ 38	+ 64	0	+ 11						
MEANS		+ 30	- 64	- 19	- 45	- 65	+ 25	+ 88	+ 202	+ 258	+ 259	+ 258	+ 88	- 13	- 25	- 45	- 64	- 7	+ 39	+ 26	+ 60	+ 28	+ 47	+ 22	+ 7	+ 45						
ALL DAYS																																
MEANS		- 15	- 8	+ 1	+ 5	- 30	+ 45	+ 94	+ 241	+ 275	+ 236	+ 161	+ 65	- 119	- 87	- 117	- 83	- 42	- 4	- 4	+ 24	+ 29	+ 64	+ 34	+ 68	+ 36						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

TABLE 221

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1938
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
DECEMBER 1938

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17° 8' E				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		-60	-48	+48	+60	-91	-66	-48	+91	+91	+66	-121	-187	-187	-181	-127	+85	+24	+181	+127	+127	+109	+85	-85	-60	-7
2		-66	+60	+290	+139	-230	-266	+199	-181	-85	+66	+199	+544	+399	+223	+121	+562	+91	+169	+278	+181	+290	+471	+211	+242	+163
3		+72	-66	+79	-356	-181	-604	-350	-302	-374	-151	-286	+115	+399	-308	+199	+640	+60	+187	-79	+30	+187	+18	-30	-72	-49
4	X	-115	-72	-79	-60	-97	-54	-18	+60	+121	+145	0	-115	-121	-308	-242	-79	0	+66	+60	+72	+72	-121	+187	-91	-33
5		-133	-115	-60	+24	-145	-242	-54	+217	+362	+181	+48	-115	-121	-187	-109	+216	0	+184	0	+49	+11	+97	0	-108	0
6		0	-221	+130	-32	+11	-65	0	+167	+281	+221	+108	-167	-313	-248	-140	+59	-49	+162	+162	+27	+54	+54	0	-97	+4
7		-119	-54	+11	-54	0	+54	+97	+324	+389	+324	+151	-562	-659	-502	-216	+22	+157	+221	+162	+108	+86	+65	-59	-43	-4
8	X	-81	-70	-43	0	0	+54	+97	+211	+302	+432	+275	-259	-329	-346	-319	-221	+49	+103	+167	+151	+81	+54	-49	-92	+7
9		-167	-162	-108	+167	+211	+49	+70	+302	+329	+567	+81	-367	-319	-270	-49	+162	+167	+59	+221	+292	+216	+76	+135	+43	+72
10		-54	-157	-216	-432	-221	+43	+243	+761	-508	+815	+637	+410	+59	+302	-324	+189	+167	+167	+135	+216	+81	+103	+76	0	-16
11		-113	+103	-113	-76	-54	+43	+97	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12		..	..	..	..	..	..	..	..	..	+254	+113	-59	-243	-443	-437	-113	+97	+113	+54	+86	+54	+65	-59	+81	..
13		-103	-157	-270	-32	-243	+97	+81	+313	+529	+432	+270	-27	-221	-481	-367	-151	-103	-22	+65	+281	+81	+32	0	0	0
14		-65	+65	-49	-205	+65	-70	-65	-22	+178	+281	+162	+243	-16	-302	-146	-194	-49	+76	+27	+54	+108	-59	+108	+113	+10
15		-49	-70	-216	-54	-70	-22	-54	-43	+216	+432	+427	+103	-103	-367	-108	-259	-54	+113	+11	+59	+43	+216	+216	+81	+19
16		-11	+130	+140	-189	-194	-205	-189	-238	+216	+1004	+281	+221	+194	-551	-108	+346	+167	+572	-157	+54	+265	+659	-119	-43	+94
17		-513	-43	-97	+238	-383	-443	+265	+302	+432	+275	+297	+151	+167	-432	-151	-65	+599	+254	-97	+43	-157	-54	-43	+54	+25
18		+486	-648	+97	-43	-1112	-302	+432	+540	+157	+183	+167	+394	+167	+319	+135	+16	-157	-59	+43	+140	+216	+265	+227	+97	+115
19		-481	+140	+54	-308	-54	-556	+27	-437	+216	+751	+491	+313	+59	+97	-205	+11	+54	-54	-54	+54	-162	-86	-162	-227	-22
20		-259	-151	-86	-173	-162	-329	-562	+54	+184	+351	+130	-281	-270	+86	+70	-59	-54	-27	+16	+16	0	+97	+135	+49	-51
21		-221	-162	-108	-16	-540	-108	+113	-81	+162	+221	+173	+65	-27	-216	-54	-103	+140	+151	+200	+378	-54	+367	+486	+427	+50
22		+27	-1015	+643	+5	-1058	+65	-108	+113	+313	+270	+173	0	-275	-135	-49	-32	+22	+97	-189	-49	+108	+54	-216	-54	-54
23	X	-103	-43	-49	-86	-130	0	-65	-11	+113	+211	+162	-27	-54	-184	-146	+49	+54	+108	+108	+54	+54	0	0	0	-2
24	X	-22	-194	-22	-43	-49	-49	0	+270	+637	+675	+238	-173	-443	-513	-486	-81	+81	+43	+140	0	-59	-49	-11	-54	-7
25	X	-65	-43	-108	+59	-108	+32	+11	+238	+481	+421	-211	-432	-378	-297	-113	+27	+54	+43	-43	+54	-81	0	-27	-22	-21
26	X	-54	-59	-97	-43	-49	-43	+27	+259	+513	+486	+113	-437	-545	-373	-270	-43	+113	+54	+11	+59	+113	+81	+11	-59	-10
27	X	-81	-43	-103	-103	-49	0	+54	+259	+497	+583	+259	-551	-594	-540	-405	+76	+205	+108	+54	+59	+162	+103	-11	-49	-5
28		-43	-43	-22	-108	-49	-81	+162	+167	+275	+400	+211	-189	-270	-367	-265	-97	+103	+54	0	+54	+108	+54	+108	+54	+9
29	X	+54	-54	+157	-211	+27	+59	+43	+167	+351	+432	+130	-270	-513	-405	-162	+221	+162	+119	+108	+103	+97	+43	+103	-43	+21
30	X	-59	-103	-119	-103	-86	-16	-81	-351	+691	+670	-76	-81	-481	-270	-248	-81	+167	+97	+130	+97	+108	+59	0	-22	+23
31	X	-54	0	-38	+22	-27	+27	+86	+346	+643	+486	+205	-297	-378	-216	-113	-43	+22	+22	-70	-27	0	+108	+59	+108	+36
MEANS ALL DAYS		-81	-117	-8	-67	-173	-105	+14	+145	+266	+422	+162	-68	-178	-240	-152	+40	+76	+111	+56	+90	+71	+97	+33	+4	+17
MEANS 10 DAYS		-58	-68	-50	-57	-57	+1	+15	+215	+435	+454	+110	-264	-384	-345	-250	-18	+91	+76	+66	+62	+44	+33	+6	-32	+1

* = 10 LEAST DISTURBED DAYS

DECEMBER 1938

DECEMBER 1938

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1938

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME.)

DAY	*	COMPONENT EASTWARD										LINE		OW		LENGTH IN KMS										93.9					DIRECTION					E 0.5 N				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN														
1		- 13	0	+ 38	+ 83	- 77	- 51	- 64	- 51	0	0	- 96	- 19	+ 51	- 57	- 121	+ 51	+ 38	+ 134	+ 134	+ 204	+ 191	+ 64	- 6	- 51	+ 16														
2		- 13	- 51	+ 160	+ 223	- 51	- 561	+ 19	- 45	- 32	+ 115	+ 651	+ 900	+ 752	+ 606	+ 651	+ 498	+ 319	+ 179	+ 115	+ 427	+ 217	+ 325	+ 242	+ 153	+ 242														
3		- 64	- 306	- 115	- 351	- 230	- 625	- 204	- 223	- 300	+ 13	- 134	+ 262	+ 893	- 160	+ 255	+ 549	+ 115	+ 128	- 332	- 70	+ 262	- 6	- 70	- 32	- 31														
4	X	- 102	- 121	- 64	- 64	- 64	- 32	- 19	- 70	+ 51	+ 102	+ 121	+ 128	+ 140	- 160	- 191	- 83	- 64	- 77	+ 13	+ 70	+ 153	+ 115	+ 230	- 89	- 3														
5		- 128	- 96	- 51	- 51	- 64	- 351	- 64	+ 128	+ 191	+ 255	+ 185	+ 153	+ 179	- 57	- 77	- 166	- 115	+ 70	- 64	+ 32	+ 57	+ 153	0	- 64	+ 2														
6		0	- 166	+ 70	- 51	- 32	- 134	- 57	+ 13	+ 134	+ 281	+ 287	+ 198	+ 51	- 57	- 115	- 115	- 262	+ 51	+ 64	- 13	+ 64	+ 128	+ 64	- 51	+ 15														
7		- 57	- 64	- 64	- 64	- 51	0	+ 64	+ 134	+ 262	+ 325	+ 396	- 198	- 478	- 383	- 230	- 191	- 70	+ 77	+ 64	+ 115	+ 70	+ 51	+ 26	0	- 11														
8	X	- 57	- 64	- 51	- 13	- 32	+ 13	+ 38	+ 70	+ 134	+ 319	+ 313	+ 185	+ 64	- 128	- 287	- 351	- 89	- 13	+ 134	+ 179	+ 70	+ 96	- 115	- 13	- 17														
9		- 96	- 115	0	+ 128	+ 115	+ 13	0	+ 185	+ 255	+ 472	+ 453	+ 64	0	- 160	0	+ 166	+ 64	- 64	+ 191	+ 325	+ 191	+ 102	+ 134	+ 26	+ 102														
10		- 57	- 115	- 64	- 319	- 389	- 204	+ 255	+ 919	- 160	+ 453	+ 951	+ 957	+ 281	+ 574	- 466	- 102	+ 70	- 57	+ 121	- 96	+ 32	+ 77	- 70	- 13	+ 107														
11		- 57	+ 89	- 77	- 115	- 57	+ 57	+ 32	+ 51	+ 115	+ 134	+ 64	+ 89	+ 70	- 51	- 185	- 153	- 185	- 38	+ 64	- 64	+ 217	- 38	+ 262	+ 160	+ 16														
12		- 191	+ 13	- 96	- 51	- 64	- 319	+ 319	+ 102	+ 242	+ 255	+ 376	+ 287	+ 191	- 249	- 313	- 198	- 64	+ 89	- 77	0	- 45	+ 57	- 64	+ 134	+ 14														
13		0	- 70	- 128	- 64	- 70	0	+ 77	+ 140	+ 268	+ 383	+ 364	+ 364	+ 281	- 115	- 268	- 179	- 185	- 70	+ 77	+ 262	- 134	- 77	- 26	+ 64	+ 37														
14		- 13	+ 32	0	- 134	+ 64	- 64	+ 51	- 51	+ 64	+ 185	+ 204	+ 504	+ 486	+ 51	- 179	- 242	- 128	+ 70	- 77	0	+ 64	0	+ 198	- 115	+ 40														
15		+ 51	- 64	- 179	- 70	- 64	- 51	- 32	- 64	+ 191	+ 415	+ 638	+ 453	+ 319	+ 64	+ 70	- 70	+ 128	+ 306	+ 191	+ 185	+ 255	+ 255	+ 440	+ 185	+ 148														
16		+ 313	+ 198	+ 434	+ 64	+ 198	+ 140	+ 64	+ 191	+ 121	+ 1085	+ 829	+ 702	+ 549	- 191	+ 128	+ 485	+ 447	+ 472	- 223	+ 102	+ 715	+ 823	+ 281	+ 447	+ 349														
17		- 64	+ 587	+ 402	+ 517	+ 345	+ 153	+ 536	+ 536	+ 689	+ 549	+ 670	+ 549	+ 804	- 160	- 134	+ 26	+ 651	+ 96	- 51	+ 217	- 83	+ 64	+ 121	+ 223	+ 302														
18		+ 510	- 345	+ 319	+ 185	- 351	- 102	+ 702	+ 951	+ 498	+ 925	+ 893	+ 740	+ 364	+ 440	+ 191	- 45	- 211	- 166	+ 83	+ 268	+ 319	+ 485	+ 32	+ 396	+ 295														
19		- 242	- 77	+ 160	- 153	- 51	+ 13	- 45	- 115	+ 64	+ 1021	+ 880	+ 804	+ 491	+ 440	+ 242	+ 447	+ 319	+ 89	+ 180	+ 370	+ 108	+ 459	+ 306	+ 204	+ 246														
20		+ 179	+ 198	+ 204	+ 230	+ 128	+ 77	- 51	+ 364	+ 293	+ 689	+ 587	+ 262	+ 70	+ 383	+ 185	+ 268	- 70	- 64	+ 77	+ 70	+ 128	+ 319	+ 370	+ 249	+ 214														
21		- 26	- 70	+ 38	+ 64	- 185	- 32	+ 64	- 64	+ 115	+ 376	+ 325	+ 325	+ 230	+ 45	+ 64	- 115	+ 64	+ 128	+ 242	+ 370	+ 204	+ 523	+ 689	+ 478	+ 160														
22		+ 415	- 644	+ 574	+ 281	- 281	+ 345	+ 204	+ 262	+ 440	+ 453	+ 644	+ 459	+ 134	+ 96	+ 51	- 51	+ 115	+ 108	- 96	- 57	+ 217	- 26	+ 70	+ 121	+ 160														
23	X	+ 70	+ 128	+ 121	+ 77	0	+ 77	+ 128	- 128	+ 70	+ 211	+ 376	+ 313	+ 242	+ 32	0	+ 153	+ 140	+ 96	+ 64	+ 64	0	+ 153	+ 160	+ 185	+ 114														
24	X	+ 96	- 26	+ 134	+ 96	+ 64	+ 70	+ 57	+ 160	+ 383	+ 657	+ 574	+ 357	+ 57	- 115	- 313	- 70	+ 38	0	+ 134	+ 102	- 32	+ 64	+ 102	+ 77	+ 111														
25	X	+ 57	+ 102	+ 64	+ 89	+ 64	+ 38	- 57	+ 191	+ 376	+ 447	+ 300	+ 57	- 115	- 191	- 115	+ 32	+ 70	+ 121	+ 26	+ 26	0	+ 115	+ 77	+ 115	+ 79														
26	X	+ 77	+ 51	+ 64	+ 64	+ 57	+ 64	+ 64	+ 102	+ 345	+ 638	+ 498	+ 102	- 191	- 242	- 255	- 64	+ 115	+ 89	+ 38	+ 77	+ 191	+ 128	+ 102	+ 57	+ 90														
27	X	+ 64	+ 102	+ 89	0	+ 77	+ 115	+ 128	+ 185	+ 319	+ 702	+ 708	+ 128	- 191	- 370	- 325	+ 64	+ 185	+ 89	+ 64	+ 128	+ 191	+ 179	+ 134	+ 115	+ 120														
28		+ 128	+ 134	+ 128	+ 89	+ 13	+ 64	+ 166	+ 153	+ 128	+ 440	+ 555	+ 338	+ 262	- 115	- 255	- 249	+ 26	+ 64	+ 26	+ 128	+ 160	+ 185	+ 211	+ 198	+ 124														
29	X	+ 204	- 38	+ 128	- 204	+ 128	+ 70	+ 38	+ 121	+ 204	+ 470	+ 378	+ 128	- 134	- 140	- 64	+ 223	+ 179	+ 140	+ 179	+ 115	+ 128	+ 77	+ 64	+ 89	+ 100														
30	X	+ 70	+ 64	+ 13	+ 77	+ 64	+ 140	+ 51	+ 242	+ 498	+ 759	+ 306	+ 389	- 160	- 115	- 255	- 185	+ 57	- 26	+ 51	+ 64	+ 70	+ 102	+ 83	+ 51	+ 102														
31	X	- 57	+ 64	+ 64	+ 96	+ 13	+ 64	+ 77	+ 242	+ 447	+ 408	+ 415	+ 160	- 13	- 77	- 102	- 134	- 45	- 51	- 89	- 51	+ 57	+ 179	+ 191	+ 191	+ 85														
MEANS		+ 32	- 22	+ 75	+ 21	- 25	- 33	+ 82	+ 149	+ 207	+ 436	+ 442	+ 327	+ 183	- 18	- 78	+ 6	+ 53	+ 64	+ 42	+ 112	+ 130	+ 166	+ 137	+ 113	+ 108														
MEANS O DAYS		+ 42	+ 26	+ 56	+ 22	+ 37	+ 62	+ 50	+ 112	+ 283	+ 468	+ 399	+ 195	- 30	- 151	- 191	- 42	+ 59	+ 37	+ 61	+ 77	+ 83	+ 121	+ 103	+ 78	+ 82														

* = 10 LEAST DISTURBED DAYS

TABLE 223

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY LINE ON LENGTH IN KMS 58.4 DIRECTION N 17° 8' E

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-114	-103	-60	-49	-76	+82	+103	+408	+647	+702	+152	-381	-479	-332	-245	-131	+103	+114	+98	+136	+98	+82	+27	+76	+36
2		-11	-22	+11	+174	-49	+16	-169	+277	+522	+60	+332	-277	-539	-555	-326	-60	+339	+218	+98	+54	0	-27	-54	-103	-8
3	X	-54	-218	0	+92	+98	-114	-65	+196	+381	+462	+332	+33	-316	-484	-261	-54	+114	+54	+60	+60	+54	-22	-65	-60	+9
4		-11	0	-98	-44	-44	+82	+54	+267	+408	+305	+163	-245	-403	-462	-375	-11	+277	+120	-44	+60	+65	+272	-60	-109	+7
5		+60	+98	-44	0	+169	+136	-283	+185	+375	+196	+76	-299	-446	-250	+152	+163	+152	+180	+114	+98	+54	+126	+60	-44	+43
6		-44	-33	-60	0	-158	+245	+316	+114	+571	+283	-326	-571	-141	-44	+207	+381	+109	+218	+169	+82	+60	+65	-65	+60	+60
7		-60	-125	+54	-141	+44	-114	-212	+87	+277	+82	-60	-337	-490	-490	-354	+131	+435	+109	+272	+354	-33	-54	-98	+22	-29
8		0	0	0	+27	+114	+120	+120	+370	+664	+653	+326	-283	-462	-343	-375	-49	-44	-33	+82	+131	+381	+207	+65	+277	+85
9		-250	-131	+163	0	-218	+103	0	+272	+455	+381	-109	-490	-734	-490	+174	+190	+261	+82	+44	+103	+163	+218	-136	-120	-4
10		+120	-54	-201	0	+207	-272	+413	+326	+462	+479	-54	-375	-430	-392	-223	+109	+54	+114	+22	+54	+152	+87	+98	0	+29
11	X	-49	-11	+60	-98	+120	+109	+44	+354	+490	+413	+76	-370	-544	-326	-457	-158	+103	+33	+54	+103	+152	+103	+22	-114	+5
12		+49	-49	+54	-44	+54	0	+109	+136	+566	+305	-11	-381	-544	-430	-207	+22	+114	-65	+54	+87	+60	+44	-54	-27	-7
13		-49	-49	0	-54	-22	-27	+196	+310	+588	+207	-163	-430	-424	-408	-141	0	+174	+27	+54	+158	+44	+277	-54	-44	+7
14		-65	-65	-33	+65	-196	+490	+272	+180	+190	+495	+294	-321	-381	-484	-114	49	0	-49	-103	-11	-136	+54	-163	-103	-6
15		-120	-245	-267	+98	0	-120	-60	+386	+375	+326	+49	-185	-359	-343	-267	-44	+212	+152	-109	-22	+16	0	-16	-54	-25
16		-76	-44	-38	+76	0	+109	+44	+294	+598	+490	-27	-430	-522	-305	-256	-33	+326	+533	+484	+332	+381	+131	0	-16	-85
17		-60	-413	-174	-163	-500	+152	+114	+98	+283	+212	+109	-245	-337	-326	-49	+60	+169	+169	+169	+60	+163	+277	+152	+131	+2
18	X	-141	-152	-120	-82	-82	-71	-114	+109	+321	+457	+473	-98	-588	-566	-332	+163	+163	+131	+109	+207	+109	+152	+98	-60	+4
19		-49	-207	+54	+54	-33	-98	+109	+65	+381	+549	+517	-98	-588	-598	-364	+22	+305	+332	+299	+299	-65	+109	+484	-65	+59
20		-54	-261	-136	-435	0	+49	-54	0	+131	+218	+152	-114	-120	-272	-163	0	+299	+239	+131	+267	-109	-11	-163	-60	-19
21		-98	0	+185	+60	-109	-109	-359	-321	+98	+348	+370	-49	-218	-163	-174	0	+190	+114	+152	+114	+76	+109	-44	-114	+2
22		-267	+44	-65	-27	0	+65	0	+163	+114	+163	-27	+54	-539	-250	-44	+316	+549	+245	0	+60	+207	+131	-305	-92	+21
23		+54	-44	-539	+272	+120	-60	0	-169	-141	+267	+430	-54	-158	-299	-332	-50	+120	+163	+87	+27	0	+359	-22	+136	+7
24		-207	-495	+109	0	-11	+22	+54	+267	+370	+261	-109	-581	-326	-430	-305	+120	+261	+207	-71	+11	-76	-65	+169	-549	-49
25	X	-468	-212	-169	-196	-60	-87	-98	-109	+169	+305	+152	-267	-539	-588	-495	-517	+109	+114	+98	0	+16	-11	-49	-218	-130
26	X	-98	-76	-82	-109	+11	+60	0	+245	+375	+386	+131	-354	-490	-375	-261	-87	+163	+152	+87	+44	-49	0	-11	-49	-16
27	X	-54	-120	-152	-44	-60	0	+54	+212	+490	+555	+277	-49	-392	-593	-533	-277	-54	-60	0	+49	+44	+54	-27	-38	-30
28	X	-60	-65	-87	-44	-54	-11	-103	+245	+604	+430	+441	-381	-381	-288	-114	-136	+267	+283	+218	+98	+98	+169	+54	+65	+52
29	X	-54	0	-60	0	-54	+16	+109	+272	+435	+484	+277	+44	-212	-343	-392	-332	-141	+44	+65	-120	-158	-103	+71	0	-6
30	X	-174	-141	-218	-228	-163	-196	-223	-60	+163	+158	-87	-207	-435	-305	-375	-180	-22	+60	+65	+109	+98	+44	-11	-54	-99
31		-54	-27	-245	+76	-239	-87	+136	+109	+114	+305	+218	-44	-267	-326	-158	-49	-65	+152	+54	0	+109	0	-22	-13	-13
MEANS		-79	-104	-70	-25	-38	+16	+16	+171	+370	+353	+141	-245	-413	-383	-231	-15	+146	+134	+91	+97	+64	+90	+1	-48	+2
ALL DAYS		-127	-110	-89	-76	-32	-21	-29	+187	+408	+435	+222	-203	-438	-420	-346	-171	+80	+92	+85	+69	+46	+47	+11	-45	-18
10 DAYS																										

* = 10 LEAST DISTURBED DAYS

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

* = 10 LEAST DISTURBED DAYS

TABLE 225

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTH-EAST LINE ON LENGTH IN KMS 58.4 DIRECTION N 17° 8' E

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-49	-71	+66	-208	-11	+109	-279	-263	+356	+323	+826	+465	-82	-301	-22	+563	+268	+645	+137	+252	-44	-219	+153	-33	+108
2	X	+213	-137	-142	+104	-55	-66	-55	-284	-170	+219	+263	-213	-498	-98	-191	+487	+104	0	+164	+55	+137	+197	+44	-49	+1
3	X	-55	+44	+55	-98	+104	+109	+109	-120	+104	-164	-104	-66	-317	-268	-71	-22	+219	+159	+159	+109	+170	0	+66	-66	0
4	X	+44	-33	-49	-66	-284	+356	0	+104	+191	+388	+224	-224	-503	-263	-263	-126	-153	+55	+104	+55	+49	-27	+22	-257	-27
5		-241	-98	-55	-279	+104	-317	-153	+104	+55	+159	+115	-274	-558	-115	+55	+492	+301	+181	+202	+306	+219	+246	+810	+246	+63
6		-339	-159	+274	-547	+175	+558	-115	-241	+842	-181	+301	+230	-274	+470	+552	+197	+416	+372	+142	+137	+263	+219	+126	-5	+142
7		-49	+98	-328	-197	+66	-399	-252	-93	+60	+219	-109	+33	-547	-164	-82	-66	+153	+98	-268	+115	+55	+66	+55	-55	-66
8	X	-153	-438	-492	-153	-66	+71	+115	+268	+383	+268	-104	-328	-635	-492	-104	-191	-66	+273	+131	+153	+191	+213	+257	+120	-32
9	X	+109	+109	+129	+328	-66	+246	+328	+164	+55	+109	+279	+153	-279	-55	+268	+126	+602	+443	+115	+427	+328	+416	+263	+98	+199
10		+164	+170	-33	+186	+44	+219	..	+88	+208	+399	-131	-345	+98	+55	+115	+394	+339	+208	+246	+930	+251	..	..	..	..
11		..	..	..	..	..	..	..	+186	+279	..	+328	+219	+109	+77	+33	+98	+49	+44	+164	+131	+109	+120	+164	+153	..
12		+109	+153	+77	+98	+66	+98	+109	+109	+153	+306	+197	+71	-44	-115	0	+55	+109	+164	+153	+213	+164	+164	..	..	..
13		..	..	+55	+98	+66	+60	+55	..	..	+66	+170	+55	+88	+465	+416	+274	+60	+115	+98	+246	+44	+115	0	+153	..
14	X	+170	+44	0	+153	0	-88	-49	-11	-55	+323	-44	0	-22	+11	+164	+164	-38	+55	+263	+170	+175	+224	-197	+219	+68
15		+219	-55	-88	-88	+98	+22	+164	-164	-33	+98	-55	-109	+55	+159	+274	+191	+153	+109	+208	+208	+717	+388	-49	-33	+100
16		-164	-230	+175	..	..	..	..	..	..	+208	+208	0	+153	+109	+268	+175	+164	+131	+44	+153	+115	+241	0	+55	..
17		-66	+252	+328	+186	+44	-93	-235	-131	+213	+306	-109	-55	-109	+170	-137	+22	-175	-49	-268	-208	-219	-208	-274	-175	-41
18		-602	+295	-263	-219	-366	-465	-268	..	..	..	..	..	..	..	..	..	..	..	..	..	+60	+328	+55	+235	..
19		-334	+49	+55	-246	+115	+263	-191	+175	+383	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-49	..
20		0	+11	+44	+49	+49	+115	+88	+109	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21		..	..	..	..	-11	+22	+98	+109	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	-77	+55	+109	+323	0	+213	+131	-295	-131	+853	-410	..	..	+897	+589	+427	+295	+1450	+208	+306	+290	+903	+197	..
25		+645	-1455	-1559	-897	-963	-1012	-602	+290	-164	-66	+137	+98	-109	-208	+49	-356	-170	-60	+33	+55	+60	+55	+49	0	-256
26	X	-49	-66	-55	-55	+11	+60	+164	+219	+268	+219	-77	-213	-328	-350	-213	+109	-66	-98	-27	+66	+98	+82	+55	+55	-8
27	X	+60	+44	-22	-77	-55	-71	-164	+55	+82	+279	+290	+66	-88	-279	-148	-66	0	-60	+22	+98	+71	-82	+60	-16	0
28	X	+88	+115	+137	-109	-11	-115	+44	+459	+421	-191	-815	-175	-268	-55	-77	-66	0	+60	+129	+55	+109	+109	+109	-197	-6
MEANS ALL DAYS		+34	-113	-107	-116	-69	-40	-61	+22	+163	+144	+64	-38	-285	-115	+3	+91	+97	+136	+84	+128	+149	+105	+97	-9	+15
MEANS 10 DAYS		+38	-39	-28	-3	-64	+61	+21	+59	+164	+177	+74	-54	-302	-215	-66	+98	+87	+153	+129	+144	+128	+91	+83	-13	+30

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1939
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
 EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 FEBRUARY 1939

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										DIRECTION										E 0°.5 N	MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																		
1	X	- 51	- 64	+ 70	- 115	- 19	+ 128	+ 64	- 531	+ 64	+ 179	+ 845	+ 1005	+ 461	- 64	+ 192	+ 704	+ 1088	+ 1203	+ 480	+ 627	+ 262	+ 256	+ 570	+ 512	+ 328																	
2	X	+ 435	+ 256	+ 186	+ 352	+ 269	+ 192	+ 141	+ 128	+ 70	+ 346	+ 736	+ 525	- 128	+ 64	+ 128	+ 794	+ 115	+ 179	+ 262	+ 64	+ 243	+ 307	+ 134	+ 122	+ 247																	
3	X	+ 115	+ 198	+ 256	+ 179	+ 77	+ 160	+ 205	+ 26	+ 64	+ 243	+ 262	+ 448	+ 64	- 32	+ 243	+ 70	+ 378	+ 442	+ 211	+ 192	+ 186	+ 128	+ 186	+ 64	+ 182																	
4	X	+ 134	+ 160	+ 77	+ 13	+ 96	+ 358	+ 250	+ 186	+ 256	+ 448	+ 525	+ 192	- 70	- 13	- 102	- 32	+ 38	+ 192	+ 250	+ 186	+ 314	+ 326	+ 346	+ 442	+ 190																	
5		+ 506	+ 390	+ 320	+ 224	+ 608	+ 256	+ 326	+ 339	+ 397	+ 448	+ 518	+ 250	- 77	+ 320	+ 179	+ 448	+ 128	+ 314	+ 371	+ 384	+ 243	+ 384	+ 774	+ 333	+ 349																	
6		- 96	- 64	+ 320	- 422	+ 589	+ 461	+ 826	+ 262	+ 858	+ 800	+ 742	+ 384	+ 218	+ 390	+ 538	+ 339	+ 422	+ 486	+ 384	+ 326	0	+ 128	- 51	+ 154	+ 333																	
7		+ 70	+ 179	- 13	- 134	+ 128	0	- 320	- 160	+ 243	+ 333	+ 90	+ 486	- 102	+ 64	+ 13	+ 26	+ 218	+ 250	+ 192	+ 134	+ 51	+ 122	+ 141	+ 115	+ 89																	
8	X	+ 102	+ 51	- 38	+ 64	+ 64	+ 141	+ 192	+ 282	+ 320	+ 326	+ 282	+ 128	- 38	- 102	+ 70	- 102	- 115	+ 134	+ 166	+ 128	+ 179	+ 122	+ 115	- 64	+ 100																	
9	X	+ 83	+ 118	+ 214	+ 480	+ 256	+ 384	+ 371	+ 77	+ 186	+ 282	+ 378	+ 704	+ 102	0	+ 198	- 166	+ 384	+ 154	+ 64	+ 382	+ 410	+ 198	+ 115	0	+ 228																	
10		+ 192	+ 64	- 134	+ 115	- 58	+ 64	+ 160	- 250	+ 192	+ 435	+ 448	- 96	+ 115	+ 51	+ 141	+ 352	+ 320	+ 179	+ 230	+ 806	- 64	- 160	- 58	- 269	+ 116																	
11		+ 269	+ 128	- 179	- 211	- 122	+ 141	+ 160	+ 102	+ 192	+ 198	+ 282	+ 326	+ 256	+ 198	+ 90	+ 96	+ 64	- 51	+ 77	+ 70	+ 64	+ 77	+ 122	+ 115	+ 103																	
12		+ 96	+ 122	+ 64	+ 64	+ 32	+ 64	+ 102	+ 26	- 70	+ 70	+ 134	+ 198	+ 128	+ 83	+ 186	+ 128	- 26	0	+ 13	+ 122	+ 115	+ 128	+ 179	+ 186	+ 89																	
13		+ 51	+ 77	+ 115	+ 102	+ 115	+ 77	+ 64	- 102	+ 58	+ 128	+ 96	+ 128	+ 205	+ 599	+ 435	+ 243	+ 70	+ 198	+ 96	+ 314	+ 51	+ 192	+ 64	+ 205	+ 149																	
14	X	+ 141	- 90	+ 64	+ 77	0	+ 154	- 26	+ 70	- 64	+ 128	+ 262	+ 134	+ 256	+ 64	+ 256	+ 307	+ 128	+ 115	+ 358	+ 224	+ 64	+ 128	- 166	+ 378	+ 123																	
15		+ 115	- 32	- 64	- 96	+ 70	+ 122	- 64	+ 96	+ 70	+ 38	- 32	+ 122	+ 70	+ 262	+ 339	+ 320	+ 269	+ 256	+ 218	+ 288	+ 896	+ 410	+ 70	- 77	+ 153																	
16		- 58	- 243	+ 160	- 77	- 128	- 58	+ 128	- 499	- 77	+ 186	+ 218	+ 102	+ 256	+ 179	+ 390	+ 90	+ 160	+ 192	+ 64	+ 250	+ 141	+ 262	+ 64	- 13	+ 70																	
17		- 198	+ 230	+ 384	- 154	+ 64	- 128	0	+ 90	+ 301	+ 314	+ 58	+ 90	+ 205	+ 467	0	+ 218	+ 198	+ 390	+ 416	+ 832	+ 781	+ 896	+ 723	+ 576	+ 281																	
18		- 128	+ 62	+ 397	+ 243	+ 141	+ 64	+ 384	+ 230	+ 256	+ 352	+ 64	+ 192	+ 64	+ 224	+ 512	+ 762	+ 326	+ 179	+ 320	+ 160	+ 243	+ 320	+ 269	+ 320	+ 271																	
19		- 58	+ 192	+ 154	+ 64	+ 198	+ 422	+ 70	+ 198	+ 230	+ 141	+ 122	+ 128	+ 141	+ 512	- 90	+ 134	+ 64	+ 192	+ 134	+ 326	+ 90	+ 51	+ 122	+ 90	+ 151																	
20		+ 115	+ 128	+ 122	+ 115	+ 128	+ 256	+ 256	+ 256	+ 512	+ 186	- 51	+ 96	+ 262	+ 122	+ 96	+ 64	+ 198	+ 230	+ 192	+ 250	+ 141	+ 115	+ 128	+ 102	+ 167																	
21		+ 64	+ 122	+ 51	+ 128	+ 64	+ 141	+ 134	+ 141	+ 115	+ 64	- 32	- 58	+ 58	+ 134	+ 320	+ 307	+ 224	+ 160	+ 134	+ 186	+ 205	+ 134	+ 141	+ 77	+ 126																	
22		+ 70	- 58	+ 64	+ 141	+ 13	+ 77	+ 256	+ 198	+ 186	+ 282	- 58	+ 128	- 32	+ 141	+ 19	+ 115	+ 83	+ 480	+ 307	+ 186	- 13	- 64	+ 128	+ 64	+ 113																	
23		+ 70	- 19	+ 32	+ 128	+ 38	+ 122	- 64	- 134	- 64	+ 83	+ 64	- 64	+ 64	+ 198	+ 224	+ 90	- 64	+ 122	+ 250	+ 186	+ 390	+ 58	0	+ 269	+ 82																	
24		+ 141	+ 128	+ 134	+ 128	+ 128	+ 128	+ 320	+ 326	+ 160	+ 320	+ 1760	+ 186	+ 1536	+ 1350	+ 2035	+ 954	+ 870	+ 1408	+ 1702	+ 237	- 128	+ 243	+ 256	+ 64	+ 599																	
25		+ 442	- 640	- 960	- 730	- 397	- 646	- 198	+ 691	- 122	+ 128	+ 51	+ 198	+ 250	+ 250	+ 198	- 416	- 294	- 122	- 70	+ 26	+ 64	+ 26	+ 77	+ 51	- 89																	
26	X	- 32	- 32	- 26	- 32	- 26	+ 32	+ 64	+ 64	+ 128	+ 198	+ 70	+ 64	+ 51	0	0	+ 256	- 192	- 186	- 64	+ 64	+ 70	+ 122	+ 64	+ 90	+ 31																	
27	X	+ 70	+ 13	+ 51	- 70	0	- 38	- 58	- 32	- 122	+ 205	+ 282	+ 218	+ 198	+ 64	+ 90	- 13	- 38	+ 38	+ 70	+ 128	+ 64	+ 70	+ 90	+ 154	+ 60																	
28	X	+ 141	+ 224	+ 192	- 96	+ 77	- 58	- 19	+ 346	+ 454	+ 320	- 448	+ 70	+ 115	+ 262	+ 320	+ 262	+ 96	- 64	+ 70	- 51	+ 128	+ 64	+ 256	- 64	+ 108																	
MEANS ALL DAYS		+ 100	+ 81	+ 75	+ 17	+ 86	+ 108	+ 133	+ 87	+ 171	+ 256	+ 274	+ 224	+ 165	+ 206	+ 251	+ 227	+ 183	+ 252	+ 246	+ 247	+ 185	+ 180	+ 174	+ 143	+ 170																	
MEANS 10 DAYS		+ 114	+ 93	+ 115	+ 85	+ 79	+ 145	+ 118	+ 62	+ 136	+ 268	+ 319	+ 349	+ 101	+ 24	+ 140	+ 208	+ 188	+ 221	+ 187	+ 184	+ 192	+ 172	+ 171	+ 163	+ 160																	

* = 10 LEAST DISTURBED DAYS

TABLE 227
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1939
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
MARCH 1939
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS 58.4										DIRECTION N 17° 8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+ 49	+326	-174	+ 54	- 54	+ 98	+250	- 87	+783	-881	-588	-245	-539	- 65	+ 11	+691	+272	-180	+299	+370	+816	+ 87	+141	+218	+ 69						
2	X	- 82	- 65	-250	+ 65	+250	- 49	+272	+ 98	+169	-109	-228	-228	-223	- 87	- 54	+245	+ 98	+152	- 76	- 87	+109	-158	+354	- 65	+ 2						
3		-136	+207	-207	+441	+218	+114	-462	+522	+169	-364	-326	-267	- 65	-218	+109	+169	+517	+272	+ 65	+740	+250	+180	-359	- 82	+ 62						
4		-228	-381	+272	+ 76	0	- 54	+190	+305	-522	-109	- 54	0	+ 54	-174	+163	+267	+120	+131	- 76	+ 44	+ 98	+ 60	+ 38	+109	+ 14						
5		+114	- 76	-446	+ 49	+495	+158	-141	+277	+ 60	- 65	-169	-239	-245	-299	+ 60	+169	+294	+212	+114	+152	+207	+ 65	+272	- 54	+ 40						
6		+ 65	- 60	+343	+261	+272	+283	+272	+462	+ 16	-114	-381	-277	- 54	- 60	- 76	- 22	- 98	+218	+435	-305	..	..	..	..	..	
7		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8		+131	+316	-283	0	+169	+ 76	+ 87	+212	+196	+114	- 27	-218	-490	-528	-337	-169	+ 11	+207	+287	+158	+462	+348	-256	+ 54	+ 21						
9		-430	-707	+299	-158	-207	-120	+ 16	+ 76	+261	+ 98	- 98	-386	-190	-403	+196	+114	+152	+ 60	+392	+250	+ 44	+136	+218	0	- 16						
10		..	..	..	..	..	..	..	+321	+604	+272	+ 65	-218	-250	-174	- 82	- 60	+ 82	+239	+435	+381	+228	+207	+212	+359	..
11		+114	+305	+152	+152	+109	+109	+152	+441	+533	+152	- 76	- 27	- 60	-125	- 33	+174	+636	+337	+ 98	+120	+555	- 76	- 87	+136	+158						
12	X	+ 60	+ 22	-354	+381	+ 87	+163	+245	+435	+174	-212	-163	-163	+169	+ 16	- 49	+316	+359	0	+152	+152	+152	+163	+141	+190	+102						
13	X	+207	+ 54	+185	+354	+218	+223	+136	+190	+114	- 87	0	0	- 54	- 76	- 54	- 11	+ 76	- 49	- 65	- 65	0	+207	- 65	+169	+ 67						
14	X	+ 98	+120	+163	- 44	-354	+125	+174	+151	+277	- 98	+218	+131	+ 49	+ 87	+169	+169	+109	+ 49	- 54	- 11	0	0	+234	+283	+ 89						
15		- 49	-381	+163	-163	-522	+326	+288	+364	+152	-593	-713	+114	- 44	- 11	+158	+294	+490	+316	+ 60	+680	+316	-190	- 82	- 33	+ 39						
16		+152	-386	+ 61	+631	-173	-277	+174	+277	+381	+136	- 65	-174	-152	+ 98	- 54	+185	+522	+598	- 49	- 98	+131	-103	+174	-424	+ 74						
17	X	+326	+ 82	+169	+ 82	+ 98	- 60	+114	+239	+125	+ 49	- 27	+ 49	+103	- 49	-152	- 16	+207	+267	0	+ 54	- 44	+ 49	+ 98	+ 44	+ 75						
18	X	+ 54	+ 54	+185	+ 98	+136	+163	+239	+381	+207	- 98	-196	-114	-114	-207	-158	- 44	+109	+152	+ 98	+169	0	+ 54	+ 44	- 49	+ 48						
19		0	0	0	+ 76	+109	+ 60	+ 87	+228	+354	+533	- 49	-490	-446	-413	-109	- 49	+169	+136	+163	+321	+925	-539	-158	-109	+ 5	+ 34					
20	X	+ 49	+ 54	+109	+152	+158	+ 65	+180	+261	+490	+ 82	-381	-277	-190	-125	-158	- 16	+ 98	+152	+ 54	+ 87	- 33	+ 65	+326	-147	+ 44						
21		+979	+930	-125	-462	+838	+370	+152	+549	+326	+169	-207	-218	-446	-359	-288	-120	+114	+185	+207	+163	+762	+163	+ 11	+343	+168						
22		+ 76	- 49	+305	+223	-294	-604	+120	+724	+658	+185	-141	+218	-283	- 71	-190	+136	+136	+218	+343	+690	+152	- 76	-250	-109	+ 98						
23		+144	- 44	-392	+277	+169	+174	+228	+598	- 44	+190	+190	- 22	-288	-109	-239	-152	+272	+ 60	+190	+23	+ 60	+212	0	0	+ 69						
24	X	-272	- 82	+321	- 44	-174	+190	+250	+141	+169	+190	- 49	-114	-218	-174	- 76	-190	+ 71	+ 65	+228	+283	+218	+109	+212	+158	+ 50						
25	X	- 49	-332	+163	+169	+163	+ 54	+136	+326	+392	+261	- 54	-430	-392	-490	-359	+ 54	+163	+ 98	+ 54	+348	0	+ 11	+ 82	+ 87	+ 19						
26	X	+ 98	-180	+397	0	- 54	+ 54	+207	+424	+375	- 27	-158	-332	-375	-158	-294	-120	- 65	+218	+631	+821	+370	-131	-272	- 44	+ 58						
27		-109	+299	+ 22	-528	- 76	+109	+239	+403	+479	+321	+403	+ 38	-326	-462	-446	+408	-294	+131	+218	-120	-316	+163	-174	+ 37	+ 283						
28		+109	-196	+267	+664	-299	+136	0	+555	+615	+381	-457	+174	+277	+435	+321	+805	+ 98	+544	+ 98	+522	+702	+479	-125	+696	+283						
29		-218	-435	+141	+163	-588	+321	+675	+772	+234	+ 65	- 98	-267	+120	-147	-234	-131	- 44	+218	+305	+403	+ 65	-620	+185	+593	+ 62						
30		- 65	..	..	..	+218	+ 82	+141	..	..	+163	-125	-386	-299	-228	+158	..	..	..	..	..	..	..	..	..	..
31		..	..	..	..	..	..	..	..	..	..	-169	-136	-152	+152	-261	+811	..	+441	+375	+457	-218	- 44	+207	+ 87	..
MEANS		+ 45	- 21	+ 55	+105	+ 14	+ 75	+160	+345	+281	- 12	-152	-132	-117	-147	- 78	+131	+179	+176	+149	+268	+175	+ 54	+ 42	+ 73	+ 67						
ALL DAYS																																
MEANS		+ 49	- 27	+109	+121	+ 53	+ 93	+195	+263	+249	- 5	-104	-148	-124	-126	-118	+ 39	+122	+110	+102	+175	+ 77	+ 37	+115	+ 63	+ 55						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS 93.9										DIRECTION E 0.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN															
1		-160	+383	-351	+115	+6	+57	+179	-45	+574	-542	-325	+102	-70	+198	+389	+791	+351	-262	+459	+861	+893	-102	-415	+453	+147															
2	X	-147	-115	-268	+26	+166	0	+230	+64	+89	-45	-64	+64	+96	+179	+64	+211	+160	+191	-134	-128	-64	+121	+408	+134	+52															
3		-153	+223	-255	+268	+134	+51	-166	+217	+268	-57	+64	+64	+293	+268	+383	+140	+664	+262	+249	+96	+772	+223	-440	+89	+152															
4		-332	-396	+179	+70	+96	+128	+255	+625	-383	-64	-57	+115	+651	+128	+485	+319	+153	+160	-57	-134	-45	-57	-70	+77	+77															
5		+64	-128	-262	-121	+383	+179	-26	+115	-77	+185	-64	+313	-64	-191	+198	+325	+306	0	0	+70	0	+64	+281	-64	+62															
6		+77	-268	+198	+268	+115	+140	+325	+249	+57	+64	-262	-121	+319	+325	+236	-70	-185	+140	+574	-255	0	-26	-115	-19	+74															
7		0	-26	-51	+51	+70	+57	+204	+121	+70	+70	-128	-191	-128	+64	-32	+64	+204	+313	+198	+223	+268	+568	+383	-160	+92															
8		-166	-778	-300	-191	+128	+26	-70	0	+128	-13	+230	+281	+38	-198	-128	-191	-57	+128	+198	+160	+708	-64	-121	+211	-2															
9		-440	-230	+549	0	-128	+160	+134	+191	+217	+223	+345	-83	+38	+128	+166	0	+70	-64	+523	-64	+51	+70	+268	+32	+90															
10		-128	-77	-64	-102	-179	0	-230	+128	+313	+140	+242	+147	+166	+319	+191	-140	-128	+32	+262	+191	+128	+115	+128	+191	+69															
11		-32	+325	-211	+191	+64	+26	+70	+102	+370	+268	-223	+102	+128	+89	+70	+160	+383	+268	-96	+64	+191	+64	+64	+115	+106															
12	X	-89	+64	-325	+242	+64	+57	+89	+255	+313	-287	-172	+70	+651	+89	+64	+306	+396	-242	-77	-13	+64	+64	+64	+115	+73															
13	X	+89	-64	-102	+357	-191	+77	0	+121	-64	-179	-70	+115	+319	+306	+191	+89	+83	-64	-64	-64	0	+198	-153	+211	+48															
14	X	+64	+77	-51	+64	-415	+134	+242	-128	+179	-64	+179	+287	+242	+185	+223	+102	+64	-38	-51	-51	0	+77	+319	+242	+78															
15		-121	-357	-715	0	-217	+383	+211	+147	+128	+64	-402	+147	+185	+70	+64	+223	+408	+287	+64	+798	+293	-96	-140	-64	+57															
16		-51	-274	-64	+638	-64	-6	+134	+64	+134	+211	-64	+160	+115	+319	-51	+166	+453	+459	-89	-51	-255	-134	+204	-313	+68															
17	X	+453	-89	+115	+77	+64	-77	+57	+121	+32	-121	+115	+313	+389	+115	-128	-51	+191	+281	-38	-51	-64	0	+83	+26	+76															
18	X	0	-96	+160	-64	+128	+179	+179	+223	+198	+13	+70	+198	+191	-32	-121	-121	0	+77	+13	+160	-51	+70	+38	-64	+56															
19		0	-64	+38	+70	+51	+57	+179	+160	+306	-57	-262	-96	-121	+57	-51	+115	+70	+166	+319	+727	-293	-115	-57	+83	+53															
20	X	+64	+70	+64	+121	+191	+115	+128	+134	+357	+255	+77	+134	+191	+64	-64	-51	+13	+121	+77	+64	-77	+83	+319	-83	+99															
21		+829	+160	-64	-128	+944	+498	+77	+459	+325	+338	-57	+708	-121	-255	-230	-166	+64	-70	+128	+268	+759	+166	+64	+249	+206															
22		+191	-230	+179	+357	+38	-689	+255	+453	+574	+281	+26	+542	+153	+26	+134	+179	-140	+128	+262	+313	+332	-160	-306	-115	+116															
23		+89	-96	-262	+115	+70	+115	+242	+498	+313	-102	-26	+223	+191	+383	+191	-134	+115	-185	+64	+179	0	+32	-64	+51	+83															
24	X	-319	-70	+255	+96	-51	+134	+255	+115	+64	+51	+140	+191	+179	+26	+102	-179	0	+38	+179	+306	+77	-64	+204	+179	+80															
25	X	-64	-325	+96	+77	+191	+77	+64	+191	+223	+204	+204	+83	+96	-134	-115	+179	+249	-51	-32	+230	+191	-121	+64	-51	+64															
26	X	+70	-268	+211	0	-26	+77	+179	+191	+306	+115	+134	+166	-38	+160	-96	-77	+13	-19	+542	+785	+293	-332	-415	-115	+77															
27		-185	+262	+128	-542	+64	+217	+179	+357	+421	+498	+491	+281	+574	-281	-70	+702	-568	+255	+51	-313	-351	+804	+115	+64	+131															
28		+179	-64	+249	+734	+83	+332	+179	+759	+887	+925	+108	+447	+944	+721	+638	+510	+166	+727	+281	-6	-995	+510	-191	+561	+362															
29		-198	-191	+281	+383	-242	+574	+791	+753	+453	-121	+217	+153	+453	+293	+96	+134	-77	+376	+64	+128	+147	-676	+287	+504	+191															
30		-102	-128	+191	+191	+319	+191	+408	+64	+204	+198	+128	-128	+581	+542	+217	+287	-57	+287	-102	+287	-383	+179	-140	0	+135															
31		-179	+179	-38	+32	+204	+77	+185	+364	+242	-128	-70	+160	+191	-281	+211	+319	+396	+478	+217	+191	-223	-408	+223	+115	+102															
MEANS		-22	-84	-16	+110	+66	+108	+159	+228	+233	+75	+17	+160	+220	+119	+104	+134	+121	+135	+129	+60	+76	+34	+29	+86	+99															
ALL DAYS																																									
MEANS		+12	-82	+16	+100	+12	+77	+142	+129	+170	-6	+61	-162	+232	+96	+12	+41	+117	+29	+42	+124	37	+10	+93	+59	+70															
0 DAYS																																									

TABLE 229

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 175.8 E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+351	+242	+231	-159	-159	+60	+274	+439	+82	-307	-269	-110	-302	-137	+55	-88	+505	-60	+198	+170	+110	-110	-44	-209	+32					
2	X	-115	-71	-93	-44	-126	+357	+209	+384	+554	+71	-99	-505	-269	-296	-357	-148	+335	+77	+231	+209	+225	+137	+44	-44	+28					
3		+33	-165	..	-99	+154	..	+351	+631	+494	..	..	..	..	..	-198	0	+274	+214	+247	+242	0	+329	+55	0	..
4		-439	+450	+27	-132	0	+198	+390	+593	+714	+285	-143	-439	-220	-362	+192	-27	+231	+445	+220	+664	-176	-269	-236	-104	+78					
5	X	+82	-571	+247	+82	-55	+176	+417	+450	+489	+439	-148	-280	-214	-340	-417	-247	-170	+44	+99	+154	+110	+55	+165	-77	+20					
6	X	+99	0	-247	-27	+44	+66	+115	+379	+395	+291	-22	-401	-450	-593	-439	-170	+22	+225	+159	+154	0	+60	+154	+55	-5					
7	X	-154	-88	-44	+60	+55	+60	+66	+494	+648	+467	+110	-357	-560	-626	-522	-357	-176	+192	+110	+159	+55	+192	-66	+82	-8					
8	X	-104	+66	+22	-55	-55	-115	+412	+472	+527	+412	-143	-362	-653	-412	-44	+33	+307	+60	+390	+187	+44	0	+22	+110	+47					
9		+137	-33	-110	-55	-55	-126	+220	+494	+318	+264	+110	-176	-406	-439	-148	+137	+318	+1510	-247	-165	+60	+988	-461	+181	+96					
10		-648	+60	+736	-38	+110	-198	+209	+906	+538	+121	+170	+126	+489	-494	-247	-351	+802	-560	-192	-55	+110	+209	-159	-55	+66					
11		+137	-346	+88	+264	+373	+176	+170	+736	+522	+253	+269	-264	-362	-247	-55	-269	-99	+165	+439	+340	+16	+192	-148	+220	+107					
12		+242	-154	+82	+154	+176	-99	+274	+379	+264	+44	-165	-280	-214	-269	-390	-209	+66	+307	+66	-60	-55	0	+110	+231	+21					
13	X	-538	+428	+22	-66	-170	+137	+253	+269	+373	+44	-329	-291	+154	-220	-126	+60	+209	+170	+357	+395	+49	-55	+71	+220	+59					
14		+71	+132	+170	-154	+115	+165	+587	+758	+670	+324	-253	-384	-209	-307	-60	-11	+44	+165	+285	+88	+55	+99	+170	+99	+109					
15	X	+55	+121	-55	+60	+220	+165	+280	+395	+307	+93	-220	-379	-285	-159	-159	+60	+159	+121	+165	+143	+49	0	0	-82	+44					
16		+82	0	+44	+27	0	+99	+335	+686	+494	+154	-274	-445	-439	-538	-747	-198	+99	+324	-27	-423	+1290	+1669	+1669	+194						
17		+824	+449	+312	+571	+1054	+1290	+851	..	..	..	..	..	..	..	+928	-176	+165	+192	+44	-27	0	-22	-66	-27	..
18		-549	+313	+329	+115	-110	-390	+302	+379	+944	-604	-500	-165	-170	-434	-225	+406	+335	-55	+55	-44	-121	+176	+170	+406	+23					
19		+99	-247	-159	+198	+99	+423	+198	+214	+406	+82	+329	-571	-165	+170	-60	0	+165	+412	+335	+269	-88	+214	-60	-115	+90					
20		-71	-384	+549	+280	-22	-335	+648	+269	+351	-27	-522	-225	-66	-230	-49	-104	+220	+428	+357	+176	-99	+11	+357	+351	+76					
21		-280	-318	+264	-220	-225	-192	+269	+758	+489	+165	+115	-714	-467	-439	-269	+110	-11	+384	+307	+110	+99	+159	0	+66	+7					
22		0	+11	+27	-11	+66	+165	+55	+384	0	-60	+192	+280	-220	-269	-307	-55	+66	+220	-110	-220	+472	+280	+571	+1351	+120					
23		+911	+785	+670	+126	+110	+450	+143	+269	-549	-231	-154	-225	-302	-439	-22	+143	+406	+170	-55	+66	-60	+99	-33	-44	+93					
24		-22	-44	-154	+132	+187	+220	+324	+412	+121	0	+329	..	..	..	+549	+829	+1263	+1510	+247	+824	-961	-121	-165	-274	..		
25		-445	+472	+368	-692	+659	+412	+472	+225	+681	+55	-681	-554	-483	-379	-66	-324	+741	+131	-82	+121	+55	-55	0	+22	+29					
26	X	-16	-38	+55	+44	0	+115	+318	+560	+417	-55	-285	-220	-269	-489	-379	-104	+49	+192	+176	+137	+33	+60	+55	+66	+18					
27		+55	-82	+104	+209	+170	+126	+368	+576	+494	-274	-681	-434	-66	+110	-335	-269	+609	-66	+214	+27	+220	+99	+340	+500	+84					
28	X	+220	-220	+55	+121	+60	+220	+274	+269	+351	-55	-285	-137	-110	-225	-115	+187	+187	+357	+285	+132	+659	-192	-55	+88	+86					
29		-66	+264	-329	+329	+373	+395	+318	+681	+472	-110	-187	-719	-395	-220	-154	-77	+66	+373	+209	+126	-225	-55	-11	+55	+46					
30	X	+60	+99	+88	+44	+165	+264	+445	+708	+55	0	-461	-587	-384	-220	0	+170	+154	+329	+214	+88	-77	-121	-33	-247	+33					
MEANS ALL DAYS		-31	+33	+116	+17	+67	+103	+297	+486	+408	+68	-168	-327	-261	-317	-202	-63	+209	+226	+154	+109	+104	+142	+63	+178	+59					
MEANS 10 DAYS		-41	-27	+5	+22	+14	+144	+279	+438	+412	+171	-188	-352	-304	-358	-256	-52	+108	+177	+219	+176	+115	+14	+36	+17	+32					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+121	+77	+249	-141	-115	+185	+121	+377	+83	+26	-77	+409	+26	-115	+198	-192	+709	-204	+198	+147	-185	-83	-32	-185	+67								
2	X	-96	-115	-192	-51	-77	+288	+236	+192	+249	+179	+153	-185	+102	0	-185	+102	+243	-243	+179	+198	+268	+64	-249	-26	+43								
3		+19	-38	+537	+256	+326	+351	+486	+569	+652	+524	..	..	..	..	-51	+141	+313	+198	+70	+121	+70	+345	-51	-13	..				
4		-479	+383	+160	-58	+51	+121	+153	+345	+383	+288	..	..	..	..	..	..	+198	+383	+204	+492	0	+64	+128	+134	..		
5	X	+224	-383	+460	+288	+128	+383	+383	+358	+435	+601	+390	+447	+447	+153	-160	-204	-198	0	+147	+134	+243	+179	+281	+32	+199								
6	X	+185	+64	-166	+89	+115	+89	+64	+256	+268	+358	+307	+204	0	-192	-262	-134	-26	+209	+141	+179	+64	+128	+192	+102	+93								
7	X	-13	0	0	+115	+64	-64	-77	+313	+581	+511	+313	+89	-77	-58	-115	-121	0	+134	+109	+153	+77	+89	+128	+153	+96								
8	X	-70	+45	0	0	-77	-160	+179	+268	+326	+383	+256	+230	-358	+121	+198	+102	+307	-89	+409	+128	-45	-179	+96	-179	+79								
9		-89	-96	-236	-89	-70	-102	0	+268	+224	+313	+383	+217	-166	-217	+281	+160	+288	+952	-173	-185	-64	+703	-320	+358	+98								
10		-460	+6	+454	0	+115	+179	+96	+460	+415	+256	+415	+345	+939	-268	-134	-332	+767	-722	-256	-198	+32	+64	+64	+70	+90								
11		-70	-185	-313	+383	+179	+77	+96	+562	+383	+249	+684	+166	-153	-173	+160	+198	-249	+121	+77	+320	-332	+134	-96	+288	+104								
12		+211	+128	+102	+256	+83	+109	+51	+185	+262	+185	+64	0	-89	-58	-38	+224	+230	+383	+121	+70	+153	+179	+192	+217	+134								
13	X	-396	+543	+128	+102	0	+160	+204	+288	+396	+288	+173	+115	+153	-249	-115	-51	+115	+153	+243	+115	+121	-19	0	+96	+107								
14		-58	+102	+121	-160	-83	-51	+256	+486	+511	-64	-320	-204	+70	-38	+262	+115	0	+77	+198	+64	0	+70	+141	-64	+60								
15	X	+77	+128	0	+77	+179	+96	+102	+409	+377	+249	+121	-102	-115	+64	+13	+128	+102	+89	+166	+115	+115	+51	0	-128	+96								
16		+70	+19	+96	+77	+64	+64	+217	+454	+435	+288	+64	-77	-128	-288	-677	-160	0	+262	-58	-198	+1853	+2933	+383	+799	+270								
17		+965	+1201	+907	+320	-1074	+320	+313	..	..	..	..	..	..	..	+805	-466	-6	0	+83	+89	+70	-58	-64	-32	..	
18		-703	+320	+249	+26	-32	+128	-192	+677	+971	-115	+748	+396	-217	-550	-185	+249	+332	-383	+64	-70	-192	+83	+51	+179	+76								
19		+256	-198	-256	+64	-51	0	+377	+447	+831	+307	+626	-89	+192	+326	-147	-192	+115	+288	+26	+224	0	+13	-13	-115	+126								
20		-141	-473	+220	+141	-83	-326	+371	+198	+320	+256	0	+51	+192	-32	+128	-115	+115	+351	+32	+92	-121	-13	+332	+204	+79								
21		-486	-441	+313	-211	-288	-268	+224	+773	+447	+569	+748	-460	-383	-351	-185	+64	-256	+96	+160	+447	-83	0	0	+51	+20								
22		0	0	0	-32	+115	+13	0	+288	+313	-26	+377	+396	-77	+77	-121	+70	+77	+230	-192	-326	+441	+230	+320	+116	+145								
23		+294	+1048	+575	-351	-371	+575	+256	+377	+895	-575	+198	+460	-198	-422	-96	-45	+313	-64	-102	+134	-26	+134	-77	-13	+122								
24		0	-64	-45	+77	+134	+83	+70	+141	+115	+268	+256	..	..	..	+275	-460	+831	+783	-415	-141	-550	-115	-767	-70	..					
25		-435	+409	+224	-460	+224	+230	+198	+351	+773	+415	-256	-102	-230	-479	-96	-345	+460	-358	-51	+89	0	-64	+32	+51	+24								
26	X	0	0	0	+32	0	+13	+64	+288	+390	+185	+121	+192	-64	-224	-198	-134	-160	-19	+64	+64	0	0	+13	0	+26								
27		-58	-89	+128	+192	+121	+64	+192	+307	+351	0	-288	-121	+70	+224	+179	+192	+473	+224	+128	+288	+268	-179	+89	+447	+133								
28	X	+128	-121	+89	+83	+77	0	0	+198	+243	+89	+77	+185	+153	-109	+249	+268	-121	+179	+179	+70	+409	+70	-51	+96	+102								
29		-160	+281	-281	+351	+326	+396	+249	+472	+505	+211	+435	-51	-160	+26	-89	-89	-115	+351	+160	-26	0	+26	+109	+58	+124								
30	X	+64	+121	+58	+32	+173	+160	+288	+658	+204	+358	+179	-121	-198	-198	+64	+121	+89	+307	+77	-70	-115	0	+77	-153	+91								
MEANS ALL DAYS		-62	+46	+82	+31	+28	+86	+152	+381	+430	+211	+227	+92	-10	-117	-41	-5	+139	+89	+79	+79	+111	+177	+64	+135	+100								
MEANS 10 DAYS		+10	+28	+38	+77	+58	+96	+144	+323	+347	+320	+209	+105	+4	-69	-51	+8	+35	+72	+171	+109	+114	+38	+49	-1	+93								

MAY 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1939

TABLE 231

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT_NORTHERLY										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+332	+305	-191	+627	+218	-147	+1264	0	+1199	+245	-109	+185	-485	-272	-300	+349	+441	+191	0	-643	+234	+278	+921	-327	+180						
2		+774	-687	-360	-131	+223	+371	+436	+556	+349	-251	-360	-218	+27	-245	-354	-174	+245	+327	+796	+518	-114	+65	-54	+289	+84						
3		-425	-174	-65	-278	+218	+278	+316	+294	-147	-82	-409	-649	-322	-240	-207	-49	+272	+360	+196	+109	+54	+98	-49	-104	-42						
4	X	+22	-120	+98	-54	+169	+153	+223	+332	+490	+131	-164	-409	-447	-485	-327	-191	+54	+174	+267	+87	+229	+490	-158	+332	+37						
5		-174	-447	-109	+185	+109	+109	+207	+360	+469	-44	-158	-114	-158	-594	-1330	-518	-191	-294	+109	+316	+240	+382	+272	+54	-55						
6		+65	+76	+98	+332	+262	-142	-44	+278	+768	+60	-382	+158	+109	+360	+131	-169	+409	+234	+567	+1155	+169	+294	+131	-1482	+143						
7		+649	-98	-251	-708	+349	+332	+490	+267	+349	-142	-327	-223	-131	-109	-251	-382	-229	+834	-196	+354	-114	0	+136	-387	+9						
8		+490	+490	-605	+403	-414	+540	+627	-240	+714	+131	-27	+272	-169	-382	-65	-316	+44	-22	+425	+583	-218	+136	-22	-327	+85						
9		-22	-387	-114	+87	+169	+196	+469	+458	+382	+371	-169	-114	-245	-213	-251	-109	0	+196	+76	+191	-22	-174	+131	-65	+35						
10	X	-54	-104	-27	+125	+131	+98	+327	+463	+371	+360	-485	-272	-153	-164	-256	-136	-131	+44	-54	-76	+44	+109	+65	-49	+7						
11	X	-54	+54	+87	+207	-60	+272	+382	+262	+60	-207	-382	-267	-131	-131	+54	+131	+109	+245	+22	+54	-22	+104	+54	0	+35						
12	X	-87	-16	+49	-54	0	-104	+218	+534	+267	+54	-180	-452	-382	-158	0	-33	+104	+169	-27	+76	0	+54	+54	+169	+11						
13	X	+11	+447	+76	-71	-54	+109	+371	+649	+431	-256	-485	-431	-223	+22	+262	+136	+349	+207	+76	+54	+98	+136	+98	+267	+95						
14	X	-11	+33	+65	+109	+98	+218	+327	+382	+54	-327	-425	-431	-251	-82	+174	+71	+229	+174	+65	-54	+164	+169	+387	+229	+57						
15		+207	+218	+409	+327	-49	+349	+441	0	-371	-164	-218	-104	-114	+54	+207	+174	-109	-158	-382	+490	+166	+60	+501	+229	+132						
16		-251	+768	-305	+109	-27	+392	+527	+403	+218	-425	-719	-736	-458	-136	+169	+218	+229	+158	-49	-142	-136	-60	-49	+207	-12						
17		+44	+54	+60	+191	+114	+120	+349	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	-60	-409	-512	-245	-82	0	+213	+278	+223	-11	+164	+5	+251	-109	-218	..
19		-736	+131	+294	+213	+218	+376	+382	+306	+164	-153	-501	-567	-496	-272	-76	+251	+332	+365	+218	+490	+305	+512	-545	+251	+61						
20	X	+283	-894	+327	+82	+114	+180	+4.5	+703	+169	-436	-589	-490	-392	-218	+104	+93	+153	+207	-109	+22	+44	+262	+322	+54	+17						
21		-327	-262	-104	+54	+218	+371	+294	+164	+294	-349	-343	-736	-392	-245	0	+332	+654	+136	+659	+730	-191	+605	+153	+44	+73						
22		-392	-65	+262	-120	+316	+376	+354	+294	-213	-376	-403	-278	-283	-153	-109	+54	+659	+136	-16	+403	+322	-82	+365	+54	+46						
23		-534	+27	+185	+109	-93	+322	+245	+278	+218	+104	-251	-458	-371	-496	-49	-153	+796	+496	+88	+850	+5	+136	-300	+109	+53						
24		0	-11	+27	+60	+223	+272	+431	-54	-283	-202	-545	-114	-294	+54	+659	+420	+54	+294	+643	+164	-387	-213	-54	-98	+44						
25		-54	+131	-164	+136	+120	+164	+327	+354	+278	-638	-185	+54	-60	+240	+87	-98	+114	+332	+174	+33	+196	-376	+54	-300	+38						
26	X	+202	+136	-174	0	+387	+311	+627	+272	+169	-518	-327	-278	-218	-71	+54	+71	+190	+54	0	+114	+54	+174	-164	0	+41						
27		+54	+114	-60	-278	+240	+62	+431	+458	+82	-272	-414	-485	-223	-272	-65	-114	+54	+174	+54	+926	-649	+60	+512	+436	+43						
28		+332	+223	+109	-120	+49	+354	+382	+501	+371	-54	-354	-425	-365	-218	-294	+289	-245	+223	+294	+283	+218	+469	-22	+376	+99						
29		-218	+436	+82	-142	-120	+164	-82	+278	+49	+60	+76	-431	-104	+164	-60	+131	+223	+218	+169	0	-27	+131	-120	+54	+51						
30	X	+54	+114	+82	-87	+87	+272	+382	+262	+256	+44	-518	-703	-490	-213	-38	+272	+278	+54	+174	-44	+213	+27	0	+54	+22						
31	X	+82	-283	+207	+114	+120	+153	+272	+501	+382	+54	-441	-719	-556	-327	-474	+164	+229	+338	+316	-82	-169	+22	-54	+27	-5						
MEANS ALL DAYS		+8	+5	-2	+52	+111	+228	+374	+322	+260	-113	-338	-325	-268	-166	-90	+25	+181	+202	+157	+240	+59	+133	+88	+3	+48						
MEANS 10 DAYS		+45	-63	+79	+37	+99	+166	+355	+436	+265	-110	-400	-445	-324	-183	-45	+58	+149	+167	+73	+15	+66	+155	+60	+108	+31						

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+333	+256	-198	+563	-448	+243	+1254	+6	+838	+736	+698	+794	+134	+122	-70	+218	+339	+160	+435	-800	+192	+557	+954	-864	+269
2		+1344	-358	-269	-224	+160	-58	+205	+154	+390	+64	-179	-134	+320	+96	-333	-160	+346	+288	+672	+493	-64	+179	-77	-96	+115
3		+179	-256	-141	-192	+64	0	+51	+314	+77	+243	+32	-205	+64	-58	-224	-128	+288	+333	+77	+122	-58	+64	-77	+32	+25
4	X	+51	-122	+58	-77	+90	-51	-13	+262	+390	+288	+198	-64	-179	-141	-70	-51	+115	+128	+141	+205	+230	+301	+102	+326	+88
5		-70	-442	0	+186	+64	-96	-38	+166	+339	+160	+102	+250	+192	-346	+1152	-435	+128	-262	+224	+307	+250	+384	+250	-77	+4
6		-70	+90	+192	+256	+269	+128	-90	+166	+710	+448	+128	+166	+390	+806	+390	-58	+589	+192	+525	+794	+70	-45	+346	-736	+236
7		+154	-160	-70	-576	+339	+62	+294	+435	+218	-128	-160	+77	+218	+32	-102	-205	-205	+480	-288	+710	+70	-128	-0	-435	+25
8		+614	+397	-258	+410	-205	+282	+538	-352	+269	+128	+275	+570	+147	-192	+218	-454	+160	+115	+256	+192	+32	+410	-38	-290	+126
9		+64	-237	-77	-45	+384	+51	+250	+339	+250	+301	-58	+64	-179	+77	-70	-70	+96	+102	-77	+64	-64	+64	+128	0	+51
10	X	-58	-58	0	+134	+96	-58	+198	+250	+326	+358	-70	+96	+128	+64	-64	-32	-64	-51	-70	-122	+58	-32	-26	+32	+40
11	X	-58	-32	+77	+218	-64	+198	+205	+134	+64	-64	-77	0	-58	-109	0	+115	+128	+269	+64	0	-122	+64	+83	-96	+39
12	X	-32	+70	+83	0	+51	-166	+70	+320	+256	+218	+160	-64	-179	+32	+141	+70	+77	+70	-58	-51	+64	-58	+64	-115	+43
13	X	+128	+371	+160	-58	-64	+70	+134	+378	+288	-26	-77	-134	-64	+128	+326	-64	+179	0	-64	-51	0	+96	-115	+26	+65
14	X	-32	0	-58	-64	-64	-64	+77	+256	+77	-186	-77	-115	-288	-115	+224	-51	+256	+77	-64	-128	+179	+51	+384	+198	+20
15		+51	-243	+371	+250	+26	0	+205	-51	-154	+64	+154	+288	+51	+192	+256	+154	-205	-224	-384	+602	+736	+154	+678	+275	+135
16		+768	+819	-166	+160	+70	+179	+198	+326	+256	-192	-326	-314	-192	0	+192	+122	+128	+70	+64	-38	-115	0	-77	+154	+87
17		+128	0	0	+115	+26	+128	+134	+358	+320	+314	0	-134	-557	-352	+134	+352	-218	+512	+608	+128	+269	-102	-179	-314	+70
18		-230	-128	+26	-58	+179	-128	+70	+352	+307	-64	-141	-64	-77	+70	+128	+230	+320	+294	+64	+77	+64	+205	-352	-77	+44
19		-768	+128	+186	+96	+70	+128	+205	+333	+198	+64	-70	-218	-320	-205	+70	+320	+256	+346	+435	+192	+550	-115	-390	+96	+66
20	X	+294	-806	+454	+70	0	-90	+256	+646	+320	-141	-250	-256	-326	-141	0	+90	+230	+346	0	+243	+58	+186	+198	+115	+62
21		-314	-320	-134	-70	0	+179	+64	+205	+288	+32	-96	-301	+128	-77	+154	+435	+691	+250	+499	+339	-550	+384	+186	+179	+90
22		-442	-454	+486	-64	+122	-32	+64	+288	+64	-256	-32	-70	+26	0	+160	+346	+1056	+410	+134	+826	+96	+77	+352	+211	+140
23		-563	+339	+339	+128	-26	+327	+128	+205	+320	+442	+384	-102	-122	-64	+198	+288	+704	+288	-64	+454	+320	+38	+198	+115	+174
24		+64	+64	+51	+51	+102	+70	+205	+134	-64	+70	-186	+326	+166	+314	+947	+397	+96	-96	+614	+307	-326	-90	0	-198	+126
25		+179	+224	-77	+115	+218	+160	+154	+512	+506	-570	-51	+224	+224	+768	+307	+64	+250	+160	+154	+358	+314	-160	-128	-192	+155
26	X	+115	+256	+26	-58	+224	+230	+384	+506	+326	-314	-102	+128	+179	+160	+243	+192	+134	-77	+32	-64	+205	+51	+70	+128	+124
27		+160	+192	0	-134	+186	+128	+256	+314	+134	0	-58	-122	0	-154	+294	+122	+333	-326	+288	+768	-122	+192	+320	+410	+133
28		+243	+333	+64	-51	0	+307	+134	+288	+269	+115	-115	-70	-243	+70	-154	+493	+64	+538	+506	+352	+314	+384	-179	+512	+174
29		-205	-26	+96	+160	+51	+186	+192	-102	-128	-64	+410	+90	+102	+435	-64	-77	+186	+154	+198	+77	-13	+134	-128	-32	+68
30	X	+70	-64	+115	0	-26	0	+128	+198	+256	+198	-243	-262	-186	0	+70	+205	+205	-64	+115	+64	+358	+51	+122	+102	+59
31	X	+90	-358	+173	+77	+64	+64	+51	+256	+384	+96	-192	-333	-243	+90	-38	+384	+83	+96	+211	-51	-77	0	+70	+19	+38
MEANS ALL DAYS		+71	-17	+45	+43	+63	+73	+192	+245	+261	+75	-1	+4	-24	+48	+68	+91	+218	+148	+169	+205	+94	+102	+88	-24	+93
MEANS 10 DAYS		+57	-74	+109	+24	+31	+13	+149	+321	+269	+43	-73	-100	-122	-3	+83	+86	+134	+79	+31	+4	+95	+71	+95	+67	+58

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 233

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTHERLY										DIRECTION N 17.8 E										MEAN						
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		- 55	+ 60	+ 55	+208	+ 55	+186	+317	+1072	+230	-520	+465	-826	-465	-164	+ 66	+197	+328	+574	+164	+274	+613	-109	-131	-230	+ 60
2		-170	+153	+252	- 98	+377	+405	+306	+405	+109	-109	-312	-722	-591	-197	+ 82	+416	+443	+279	+279	+142	+ 98	+295	-159	- 49	+ 68
3		- 98	- 93	+ 66	+ 22	-334	+525	+629	+602	+438	-197	-903	-924	-498	- 55	+219	+274	+580	+449	+405	+137	+115	+274	-219	- 60	+ 56
4		-115	-438	+164	+131	+284	+186	+635	+323	+372	- 49	-476	-520	-492	-219	+ 55	+191	+279	+153	+120	+175	+ 60	+ 66	+ 82	+ 44	+ 42
5	X	-438	- 77	+153	+ 82	+159	+246	+334	+662	+153	+ 66	-328	-536	-339	-219	-109	+ 98	+383	+257	- 22	+ 55	+ 66	+164	+115	- 71	+ 36
6	X	-109	- 98	+120	+ 98	- 49	+317	+470	+514	+388	0	-465	-624	-607	-383	-137	+120	+175	+301	+109	- 60	- 55	+ 11	+197	+ 82	+ 13
7	X	- 66	- 55	0	+ 22	+ 77	+131	+186	+241	- 55	-295	-279	-334	-219	-219	-104	+ 88	+164	+208	+224	+ 88	- 55	- 98	- 60	- 49	+ 19
8	X	0	+ 55	- 49	- 55	+126	+164	+427	+432	+ 49	-334	-394	-356	-230	-159	+ 44	+115	+109	+170	+104	+115	+ 49	+219	+109	+115	+ 34
9		0	0	0	- 93	+ 98	+208	+328	+301	+372	+ 27	-328	-394	-301	-350	-284	- 49	+263	+109	+ 55	- 60	0	+ 60	- 66	- 82	- 8
10	X	- 44	+ 88	+186	+137	+208	+115	+514	+438	+ 44	-274	-438	-52	-219	-268	-230	+ 22	+164	+109	+137	+ 11	+ 22	+115	+170	+104	+ 36
11	X	+ 55	-235	-115	+334	+383	+339	+268	+339	+164	-279	-356	-503	-498	-175	+109	+120	+487	+330	+213	+137	- 55	- 88	+131	+ 27	+ 48
12	X	+213	+274	+159	+246	+213	+252	0	+394	+175	- 22	-268	-208	-131	- 95	0	-113	+131	+ 36	+178	+291	-119	0	- 53	+131	+ 70
13		+285	+113	+131	+ 59	+267	+143	+291	+446	-119	-505	-487	-511	-184	-511	+ 24	+434	+214	-125	+105	+ 65	+285	+125	+475	-190	+ 76
14		+404	+1847	+380	-148	+202	+285	+143	+647	+297	+273	- 95	-546	-422	-178	+113	+ 59	+107	+214	+ 35	- 71	-119	+148	- 71	- 12	+148
15		-172	-238	+273	+ 24	0	+190	+350	+ 59	+172	+238	-131	-440	-356	-208	-178	-238	+285	+172	+446	+642	+249	+321	- 65	+143	+ 64
16		+ 53	-267	+416	+131	+ 65	+ 30	+208	+ 48	+226	-475	-440	-184	-226	-208	- 89	+ 83	+119	+143	+ 24	- 89	- 53	0	+ 30	0	- 19
17		0	+ 71	+ 59	+ 65	+113	+238	+356	+422	+238	0	-327	-630	+131	-440	-190	+422	+ 71	+131	+416	+202	+107	+434	-154	+333	+ 86
18		-238	+529	- 83	+113	+285	+125	+594	+261	+ 48	-172	-416	-861	-570	-261	+ 24	+463	+677	+350	+125	+261	+249	+267	- 59	-321	+ 58
19		+ 59	-166	+ 30	+107	+404	+386	+416	+535	+178	+ 71	-368	-541	-380	-208	-333	- 30	+416	+499	0	+178	+ 36	+238	+261	0	+ 74
20		0	+166	-107	-131	+119	+190	+333	+564	+434	- 53	-487	-766	-647	-356	- 30	0	+226	+297	+380	+273	+166	+368	-303	- 89	+ 23
21		-345	+107	+ 59	+143	- 53	+ 89	+535	+434	- 71	- 48	-178	-327	+ 48	-131	-469	-345	- 30	+148	+226	+125	+ 65	+630	+178	+255	+ 44
22		-178	-107	- 83	-148	+166	+238	+285	+249	+ 71	+107	-333	-529	-475	-113	+125	+380	+267	+208	- 59	+172	+ 24	-148	-166	+238	+ 8
23	X	0	0	-113	+356	+166	+148	+552	+362	+125	0	-125	-416	-172	-356	+ 24	-148	+190	+ 59	+178	+321	+ 89	-184	- 48	-119	+ 37
24	X	+ 48	- 24	-184	+125	+184	+285	+463	+582	+ 65	-232	-368	-392	-125	-327	-333	-148	+ 95	+303	+226	+208	-154	0	- 48	+119	+ 15
25	X	- 59	+ 59	+ 65	+107	+172	+244	+297	+291	+303	-469	-600	-475	-166	+ 95	+ 65	+137	+285	+ 77	- 71	+238	- 89	+119	+190	+ 95	+ 38
26		0	+178	+148	+291	+107	+291	+416	+428	+131	-226	-597	-838	-624	-832	+766	+440	+653	+546	- 53	+ 48	0	+368	+327	+ 59	+ 84
27		+ 24	-333	+148	+440	+434	+143	+570	+469	+345	+ 65	-434	-362	-350	-137	0	+ 53	+119	+148	+ 53	0	+ 48	+226	0	+166	+ 76
28		- 30	0	+ 59	- 12	0	+166	+315	+ 77	+303	+143	-184	-529	-244	-362	- 71	+410	+261	+380	+356	+190	+974	-327	-475	-416	+ 41
29		+279	-517	+362	+ 30	+125	+653	+386	+689	- 53	- 59	-624	-374	-303	-327	- 89	+190	+178	+362	+475	-244	- 89	- 30	+451	-107	+ 57
30		-178	-208	-327	+410	+119	+172	+380	+249	+356	+214	- 95	-451	-398	-273	-386	+ 95	+297	+107	+184	-24	+ 77	- 30	- 65	+214	+ 18
MEANS ALL DAYS		- 29	+ 28	+ 74	+100	+149	+236	+377	+418	+183	-104	-377	-512	-335	-255	- 44	+125	+265	+233	+202	+127	+ 87	+114	+ 19	+ 11	+ 46
MEANS 10 DAYS		- 40	- 1	+ 22	+145	+164	+224	+351	+426	+141	-184	-362	-410	-271	-211	- 67	+ 29	+218	+186	128	+140	- 30	+ 26	+ 70	+ 43	+ 31

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		EASTWARD					LINE					OW					93.9					E 0.5 N										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		- 58	+122	+ 96	+179	+ 51	- 26	+115	+814	+474	-455	-276	-237	-128	+128	+199	+186	+333	+462	+231	+199	+192	+327	+ 90	-154	+119						
2		-231	+ 64	+359	- 6	+128	+122	0	+231	+167	+391	+199	-250	-167	+218	+320	+583	+234	+359	+385	+282	+186	+115	- 51	- 32	+150						
3		- 90	+ 45	+282	+115	- 26	+ 77	+205	+282	+468	+160	-353	-423	-128	+282	+385	+224	+481	+250	+276	+282	-314	+122	- 96	+218	+114						
4		+ 26	-308	+128	+179	+244	+128	+282	+122	+436	+115	-128	0	- 32	-109	+103	+179	+301	- 38	+115	+ 77	- 64	+103	+147	+ 32	+ 85						
5	X	-327	- 71	+237	+250	+122	+ 64	+154	+513	+135	+205	- 64	-186	- 71	0	+ 51	+154	+327	+135	-109	- 64	-122	+269	+205	+115	+ 80						
6	X	- 71	- 58	+128	+ 90	-135	+128	+179	+327	+436	+237	-122	-179	-205	-122	0	+167	+128	+103	+ 64	- 64	0	+ 32	+199	+160	+ 59						
7	X	+ 77	+ 51	+ 58	+ 83	+ 96	+109	+122	+135	+ 64	- 58	0	+ 51	+128	+ 71	+ 77	+128	+122	+128	+ 71	+128	0	0	+ 38	0	+ 70						
8	X	- 71	+103	+103	+ 64	+ 64	+ 77	+179	+205	- 58	- 71	- 77	+ 83	+ 58	- 38	+ 26	+ 32	+ 64	+128	+ 71	+192	+ 64	+160	+103	+135	+ 66						
9		+ 45	- 13	- 32	- 38	+ 71	+ 71	+192	+199	+244	+160	0	0	+ 13	- 64	-192	-256	+256	+103	- 96	+179	+ 71	+135	- 58	- 77	+ 38						
10	X	+ 6	+ 64	+199	+128	+179	-160	+256	+340	+122	-128	-147	+115	+224	+ 64	- 58	+128	+186	+ 77	+ 45	+ 51	+ 77	+199	+141	+122	+ 93						
11	X	+ 71	-160	- 77	+224	+205	+224	+192	+288	+122	-192	- 58	-314	-378	- 51	+103	+122	+462	+320	+122	+128	- 58	-179	+ 64	-192	+ 41						
12	X	+128	+244	+128	+135	+135	+ 13	- 51	+186	+186	+ 58	+ 64	0	+ 64	+ 58	+109	+ 26	+122	- 64	+115	+359	- 64	- 90	- 90	+ 71	+ 77						
13		+ 96	+160	+103	- 77	+269	- 32	+ 64	+385	+167	-308	-295	-167	+192	-218	+353	+603	+218	+115	+506	+ 26	-295	+474	+263	-205	+142						
14		+154	+1429	+385	+224	+147	+ 96	+179	+391	+385	+282	+186	-128	-192	- 26	+128	+128	-141	+327	+ 77	+128	-314	+122	0	- 32	+164						
15		-378	-154	+256	0	-186	+135	+ 51	- 58	- 83	+ 13	+199	+ 51	+ 83	- 38	- 58	-192	+ 64	+154	+417	+295	+320	+288	- 90	+199	+ 54						
16		+ 96	-500	+769	- 58	0	- 58	+141	+ 71	+442	-256	-308	-160	- 96	0	+ 32	+160	+ 58	+ 64	+ 32	+ 26	0	+ 71	+ 51	+ 51	+ 26						
17		0	+ 13	+ 19	0	+ 26	+ 64	+167	+263	+199	- 32	-122	-186	-436	-378	-192	+385	+ 51	+135	+641	+295	+179	+135	+ 64	+314	+ 67						
18		-122	+231	+135	- 64	+218	+ 96	+423	+192	-256	-276	-186	-385	-308	-128	+141	+481	+769	+346	+ 83	+308	+ 64	+ 71	+154	- 71	+ 80						
19		-199	-173	- 26	+160	+122	+154	+282	+346	+ 64	+122	+ 64	-128	+192	+199	-199	+ 64	+538	+397	-346	- 71	+128	+192	+269	+ 58	+ 92						
20		+ 51	+186	- 58	- 71	+109	+ 71	+ 64	+276	+378	0	-224	-385	-231	0	+160	- 51	+154	+128	+276	-128	+192	+333	-199	+115	+ 48						
21		-423	+192	+179	+103	+128	-167	+288	+269	-128	- 90	+ 83	+ 51	+692	+359	-288	-314	- 96	-256	+263	+147	+ 32	+442	+250	- 51	+ 69						
22		-333	+ 64	+ 26	+ 32	0	+128	+199	+ 38	-179	+ 77	- 32	-199	-250	+135	+397	+449	+231	+320	-122	+192	+ 83	-327	-224	+308	+ 42						
23	X	- 71	+ 71	+ 51	+205	+ 96	+ 64	+269	+ 90	-115	+115	+250	+ 26	+199	0	+218	- 77	+244	+ 26	+115	- 71	+333	+ 32	+ 38	-269	+ 77						
24	X	+154	- 51	-128	+128	+141	+154	+244	+385	+122	-186	-192	- 32	+237	0	+ 71	0	+ 64	+256	+192	+199	-122	- 32	- 32	+135	+ 71						
25	X	-103	+ 64	+ 38	+ 64	+ 64	+ 71	+ 51	+128	+128	-353	-346	-186	+ 64	+462	+462	+263	+192	+154	- 71	+103	-115	+244	+385	+ 77	+ 77						
26		- 51	+128	+ 83	+314	0	+ 96	+ 32	+295	+314	+ 51	-115	-320	-308	-769	+820	+346	+545	+603	- 64	+ 64	+ 77	+385	+346	- 32	+118						
27		+186	-385	+308	+417	+333	+128	+308	+179	+320	+179	- 71	+ 26	+135	+ 64	+ 83	+ 32	0	+128	+ 83	+ 26	+ 64	+ 19	- 77	+192	+112						
28		0	0	+ 32	- 58	+ 64	- 77	+ 38	-135	+378	+199	+ 71	-179	-128	-327	+301	+462	+231	+320	+314	+237	+231	+314	+449	-506	+ 93						
29		- 32	+141	+487	+115	- 71	+513	+250	+513	+340	-231	-276	+ 64	+ 77	- 32	- 32	+147	+212	+256	+397	-179	- 77	-103	+141	+109	+114						
30		- 38	-231	-263	+423	+ 77	+ 71	+288	+141	+256	+263	+288	+ 77	-109	- 51	+135	+192	+320	-173	+ 71	+ 32	+ 32	- 26	-115	+218	+ 78						
MEANS		- 50	+ 42	+134	+109	+ 89	+ 78	+172	+247	+184	0	- 66	-117	- 27	- 10	+122	+158	+222	+175	+172	+113	+ 26	+128	+ 79	+ 34	+ 84						
MEANS 10 DAYS		- 21	+ 26	+ 74	+137	+ 97	+ 74	+160	+260	+114	- 37	- 69	- 62	+ 32	+ 44	+106	+ 94	+191	+126	+ 62	+ 96	- 1	+ 64	+105	+ 35	+ 71						
* = 10 LEAST DISTURBED DAYS																																

* = 10 LEAST DISTURBED DAYS

TABLE 235

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTHERLY										LENGTH IN KMS 58.4										DIRECTION N 170.8 E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-491	+533	+42	-180	+323	+126	+371	+305	+264	+30	-365	-569	-347	-204	0	+228	+311	+246	+144	-216	-413	+192	+407	-305	+18						
2		-60	-114	-108	0	+294	+509	+509	+563	-60	-66	-252	-431	-288	-66	+288	+629	..	..	..	..	..	..	..	..	..
3		..	..	..	..	..	..	..	..	..	..	+467	-144	-515	-323	-264	+120	-9	+210	+389	+180	+311	+149	-60	+210	..
4		+180	+335	+240	+252	+24	+264	+407	+791	+695	+485	-467	-126	-419	-683	-455	-114	-353	+174	-893	+1677	+1066	+1276	+719	+288							
5		+785	+1581	+1030	+150	+887	+539	+707	+419	+893	-425	-359	-395	+617	+335	+192	+144	+120	+180	+317	+431	+300	-96	+210	+72	+274						
6	X	-240	-371	-629	+216	+192	+294	+323	+294	+198	+60	-60	-246	-246	-240	-150	-66	-90	0	+90	+120	-48	0	+48	+60	-20						
7	X	+48	+66	+48	+48	+84	+150	+270	+323	+659	-120	-144	-172	-120	+84	+36	+30	-66	-30	+144	-48	0	0	0	-24	+53						
8	X	0	+24	-30	+72	+120	+180	+311	+509	+407	-66	-407	-485	-575	-329	-240	+66	+449	+509	+569	+48	-72	+24	+66	+108	+52						
9	X	+120	+108	+66	+66	+60	+240	+270	+353	+347	0	-246	-132	-168	-276	-114	+120	+108	+126	+126	+12	-66	0	+48	+150	+59						
10	X	+120	+60	+60	+18	+24	+150	+210	+300	+359	0	-300	-467	-359	-288	-180	+120	+168	+114	+114	+48	0	+60	+120	+66	+22						
11		+60	+60	-72	+180	-120	-30	+479	+635	+126	-126	-473	-172	-172	-240	+66	+168	+156	+108	+66	-54	+18	+168	+126	+180	+46						
12		+186	+120	+84	+210	+180	+329	+305	+593	-353	+347	-833	-719	-311	-66	-60	+288	+695	+335	+186	-60	+120	-48	+60	+114	+71						
13		+66	+114	+180	+180	+192	+246	+551	+509	-66	-383	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14		+893	-240	-246	-539	+659	+779	+359	+695	+629	-593	-192	-204	-300	-168	+389	+210	+527	+515	+48	-216	+300	+144	-168	+66	+139						
15		0	+66	+132	+359	+150	+659	+389	+192	+216	+84	-168	-425	-593	-240	-90	+108	+300	+216	+120	+270	-78	-72	-60	-84	+60						
16		-66	-485	+407	+719	+180	+479	+509	+539	+288	-126	+144	-647	-731	+90	+407	+180	+449	+323	+407	+48	-180	+48	-54	+108	+127						
17		+539	-551	+300	+180	+228	+270	+539	+851	+60	-264	-305	-533	-419	-300	-60	+270	+305	+66	+311	0	0	-162	-240	+84	+49						
18	X	+72	0	+120	+120	-48	+300	+599	+623	+473	+90	-473	-887	-689	-216	+30	+204	+311	+150	+222	-36	0	0	+96	+144	+50						
19		0	-126	-359	+180	+120	+300	+509	+311	+353	+84	-240	-371	-329	-539	-294	-473	+359	+821	+186	-84	+114	+665	+934	+809	+122						
20		-311	-294	0	+339	-60	+96	+413	+365	+1042	+461	-234	-138	-60	-30	-150	-317	-114	+120	+240	+305	+359	+120	+90	+66	+104						
21		+180	+108	+120	-144	-114	+1527	+311	+328	+898	+419	+120	+42	-252	-365	-162	+108	+425	+198	+347	+407	+359	-473	+276	+72	+222						
22		-60	-210	-150	+36	-359	0	+83	+359	+126	-126	-300	-413	-479	-66	+120	+54	-24	+210	+234	+503	..	..	..	..	..	
23		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27		+60	+240	-48	-90	+323	+240	+204	+958	+383	-365	-449	-431	-96	-120	+186	+425	+168	+60	-60	-138	-114	-12	+60	+449	+76						
28	X	-120	-90	-72	+66	+132	+240	+246	+276	+186	-210	-485	-399	-365	-234	0	+228	-371	+108	+90	0	+60	-12	0	-54	-1						
29	X	+102	-120	+126	+186	+186	+234	+431	+305	0	-401	-389	-479	-335	-329	-174	+108	+180	+192	+228	+120	+60	0	0	+60	+7						
30	X	-120	+24	-42	+60	+84	+192	+353	+647	+347	-311	-587	-509	-551	-934	0	+66	+180	0	-60	+60	0	+144	+120	+24	-5						
31	X	-36	-30	-30	+54	+90	+270	+431	+491	+172	-419	-785	-803	-772	-228	-180	+311	+473	+539	+210	-54	+54	-66	-114	-48	-17						
MEANS ALL DAYS		+85	+44	-35	+118	+161	+338	+392	+511	+376	-59	-335	-402	-295	-210	-44	+105	+236	+220	+141	+115	+80	+71	+144	+118	+78						
MEANS 10 DAYS		-5	-33	-38	+91	+92	+225	+350	+412	+315	-138	-388	-457	-418	-229	-97	+119	+208	+171	+182	+27	-1	+15	+38	+37	+20						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION E 0°5' N				MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		-450	+412	+95	-254	+342	-13	+222	+216	+178	+25	-70	-228	-70	0	+209	+266	+311	+216	+51	-120	-184	+127	+152	-228	+50
2		-184	+120	+76	-57	+241	+127	+222	+247	+19	+32	-51	-184	-165	+127	+431	+216	..	..	..	..	+495	+101	+127	-63	..
3		+824	+412	+425	+336	+158	+13	-279	+463	+285	+621	+552	+469	+241	+190	-76	-158	-139	-190	+406	-95	+57	+158	-63	+190	+200
4		+368	+495	+311	+317	+63	-32	-127	+723	+266	+729	-146	+51	+1078	-501	-266	-254	+82	0	+158	+1395	+983	+780	+970	+786	+343
5		+380	-266	-374	+165	+266	+304	+507	+228	+938	0	-254	+184	-292	+501	+228	-32	-95	0	0	-38	-216	+32	+178	+127	+103
6	X	-247	-184	-355	-63	-13	-76	+101	+152	+127	+63	+158	0	-63	0	+32	0	-95	+63	+63	+63	0	-51	+51	+25	-10
7	X	0	+32	0	-13	-44	0	+127	+178	0	-70	+63	+63	+133	+247	+178	+63	-139	-133	-70	-70	-51	0	-76	-63	+15
8	X	-13	+32	-63	+51	-63	-76	+114	+241	+247	+63	-32	-76	-139	-95	-222	+120	+222	+304	+380	-63	-51	0	+32	0	+38
9	X	+38	+63	0	+63	0	+178	+63	+247	+254	0	-51	+139	+32	+32	+114	+190	+95	0	+63	-51	-51	-63	-76	+95	+57
10	X	+63	+63	0	-63	-63	-63	-51	+70	+228	+76	-76	-190	-101	-114	-95	+114	+114	+101	+127	+25	0	+13	+82	0	+13
11		-13	-114	-247	+70	-399	-437	+463	+697	+393	0	-165	+197	-63	-120	+254	+228	+70	0	+57	-51	0	+127	+76	+178	+50
12		+184	+51	-32	+114	+139	+190	+101	+355	-190	+380	-158	-456	-139	+190	+184	+266	+621	+178	+190	+63	+70	+63	+38	+133	+106
13		+57	+70	+139	+127	+70	+76	+266	+374	-13	-203	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14		+723	-114	-292	-539	+120	+761	+89	+552	+831	-89	+120	+89	0	-95	+704	+190	+336	+139	-51	-304	+171	+25	-222	-25	+130
15		-285	+101	+63	+254	0	+266	+70	+51	+133	+190	+197	-178	-89	+139	0	+63	+133	+114	0	+190	-165	0	-51	-133	+44
16		-254	-507	+152	+704	+190	+222	+63	+178	+197	+209	+514	-120	-203	+456	+425	+178	+190	+254	+355	-152	-139	-178	-418	+266	+108
17		+456	-336	+254	+89	+120	+216	+285	+425	0	-190	+82	-32	-70	-114	+139	+336	+380	+57	+152	+63	+51	-178	-349	+178	+84
18	X	+127	+95	+127	+101	0	+63	+285	+203	+254	+228	+63	-431	-222	+203	+76	+171	+507	+412	+133	+152	+51	+89	+114	+63	+119
19		+178	+95	-203	+139	+63	+63	+241	+184	+190	+203	+158	+32	+127	-63	+127	+197	+456	+723	+152	-76	+70	+355	+349	+1376	+214
20		-127	-247	-76	+571	+114	+254	+222	+235	+596	+501	+133	+393	..	..	..	..	..	+32	+89	+178	+101	+190	+63	+57	..
21		+51	-38	0	-209	+171	+114	-311	+602	+697	+723	+330	+387	-127	-190	-57	-146	+197	+70	+368	+304	+190	-735	+380	+127	+164
22		+139	-120	-89	+76	+32	0	+456	+260	+178	+32	+190	+63	-120	+247	+266	+127	+120	+152	+101	+158	+285	..	..	..	..
23		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27		+203	+437	+76	+133	+431	+254	+266	+203	+133	-89	-158	-165	+374	+482	+507	+799	+120	+51	+63	+38	+63	+114	+203	-76	..
28	X	+437	+254	+254	+317	+311	+380	+374	+317	+368	+76	-38	+25	+76	+89	+184	+304	+444	+89	+158	+133	+51	+152	+70	+184	+209
29	X	+95	+190	+190	+190	+139	+63	+285	+247	+63	-63	+63	+51	+197	+13	-76	+114	+228	+127	+247	+203	+127	-152	+254	+95	+120
30	X	+51	+127	+51	+101	+114	+127	+336	+685	+501	+63	-114	-190	-266	+95	+254	+89	+197	-57	-25	-32	+241	+89	+203	-101	+106
31	X	+114	+139	+51	+63	+101	+203	+387	+456	+197	-101	-368	-380	-437	+120	-70	+317	+444	+571	+380	-51	+76	0	-165	+178	+93
MEANS ALL DAYS		+132	+63	+21	+93	+93	+163	+157	+334	+273	+132	+29	-33	-1	+64	+120	+148	+203	+134	+146	+66	+58	+37	+74	+163	+111
MEANS 10 DAYS		+66	+81	+26	+81	+48	+80	+202	+280	+224	+34	-33	-99	-79	+59	+38	+148	+202	+148	+146	+31	+39	+8	+49	+48	+76

* = 10 LEAST DISTURBED DAYS

TABLE 237

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LINE_CM		LENGTH IN KMS 58.4										DIRECTION N 17° 8' E										
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN								
1		+102	+204	+81	+254	+204	+224	+611	+906	+458	-122	-295	-92	+112	+316	+305	+489	+214	0	0	0	0	0	0	0	0	0							
2		+183	-295	-316	-81	+254	+346	0	+102	+326	+254	+285	+346	+102	+214	0	+122							
3	X	+124	+204	+356	+387	+407	+387	+407	+926	+692	+143	-112	-214	-92	+163	+122	+102	+183	+326	+224	+102	+92	0	0	0	0	+209							
4	X	+41	-20	+285	+114	+61	+305	+529	+407	+102	-183	-285	-204	-295	-305	-295	+81	+183	+183	+102	-41	0	+102	-41	-41	+33								
5	X	0	+102	-143	+153	+102	+204	+489	+611	+397	-234	-590	-774	-702	-356	-81	+204	+387	+458	+377	+316	+124	+214	+285	+112	+73								
6	X	+183	+183	+122	+224	+183	+204	+326	+428	+295	+51	-214	-417	-499	-407	-92	+153	+204	+204	+193	+102	+122	+102	+102	+193	+81								
7		+387	+193	+41	+214	+163	+163	+305	+295	+407	+102	-193	-428	-356	-305	0	+112	0	-112	0	0	+92	-20	0	+102	+49								
8		+102	+102	+112	+102	+183	+153	+285	+214	0	-305	-468	-478	-295	+153	+295	+285	+92	+102	+102	-41	0	81	0	0	+32								
9		+92	+31	+285	+244	+102	+81	+489	+499	+254	-316	-652	-529	-214	+102	-92	-102	-143	-153	0	+61	0	+92	+20	+102	+11								
10		-51	-102	+153	+1150	+102	+305	+407	+326	+305	-183	-601	-794	-631	-254	+244	+122	+489	+275	-112	-102	-122	0	+81	+122	+47								
11		+122	+81	+92	+102	+81	+224	+407	+356	+204	-316	-906	-764	-489	-254	+51	+458	+224	-122	+153	+407	+1955	+509	+2138	+590	+221								
12		+713	+509	+1710	-153	-326	+326	+590	+346	+295	-112	-499	-621	-193	-285	-254	+346	-51	+61	+407	+407	-387	-499	+163	-122	+99								
13		-519	+204	+407	+204	+224	0	+499	+499	+529	-305	-1018	-855	-316	-102	+305	+244	+163	+183	+224	+183	-570	+143	-193	-61	+3								
14		-41	-305	+71	+204	+153	+285	+611	+407	+102	-397	-529	-367	-214	+51	+214	+193	+102	-51	+102	+61	-81	-102	0	0	+20								
15		0	+102	0	+81	+102	+183	+499	+692	+153	-285	-428	-509	-428	-326	-153	+183	+387	+285	+102	+81	+204	+346	+326	-397	+50								
16		+387	-112	-214	+41	+254	-102	+122	+916	+102	-468	+723	-234	-367	-275	+41	+183	+692	+550	+692	+499	-753	+326	-183	-305	+151								
17		-397	-285	+407	+214	+173	+407	+428	+865	+428	0	-407	-652	-896	-601	-153	+102	+183	+285	-51	0	+102	+112	0	-51	+9								
18		-31	0	-20	-61	+285	+183	+489	+611	+407	0	-458	-458	-285	-305	-112	-254	+81	+285	+295	+112	0	-102	-122	-305	+10								
19		-183	-51	+51	+204	+183	+285	+387	+1222	+1099	-855	-713	-916	-713	-448	-102	+153	+122	+112	+183	+92	+193	0	0	0	+13								
20		+183	+81	0	0	+81	+122	+367	+367	+224	-153	-428	-509	-489	-183	+102	+285	+183	+193	+224	+41	+122	+81	+204	+81	+49								
21		+102	+102	+143	+102	+356	+265	+489	+519	+224	-316	-397	-631	-631	-428	-254	+438	+702	+204	+428	+2572	+1232	-1140	-61	+81	+163								
22		+163	+367	-153	-377	-214	+692	+1690	-326	+265	+10	-305	-305	+326	0	+509	+570	+509	+1415	+407	+81	+336	+550	-855	+285	+235								
23		+1150	-713	+743	-886	-733	+1140	+265	-112	-214	-285	-153	-92	-193	-20	+285	+326	+346	+305	-407	-407	0	0	-102	-428	-8								
24		-204	+183	+305	-326	+509	+132	+61	+570	+295	-122	-570	-489	-204	+102	+122	+265	+305	+183	-295	+204	-112	-122	-102	+41	+30								
25	X	+20	+132	0	-102	-356	+285	+611	+601	+377	-122	-326	-489	-590	-397	-102	+336	+153	+122	0	+102	+41	+92	-102	-81	+9								
26	X	-122	+20	+112	+285	+204	-81	+489	+702	+499	0	-509	-458	-601	-428	-102	+254	+499	+214	+183	+224	-92	-285	-102	0	+38								
27	X	0	+51	+31	-183	+254	+285	+570	+825	+590	-244	-326	-550	-570	-285	-305	+112	+183	+153	0	+102	-20	+31	-20	-20	+28								
28	X	+112	+163	-112	-122	+295	+204	+529	+733	+316	-102	-285	-326	-519	-326	-183	-193	0	+285	0	+102	0	-41	-112	-81	+14								
29	X	0	+51	+81	+102	+193	+285	+519	+702	+295	-489	-733	-672	-397	-244	+163	+204	+295	+173	0	0	0	-41	-102	+51	+18								
30		+81	-41	+102	+305	+244	+316	+621	+662	-896	-1038	-590	-387	-285	+41	+153	+529	+285	+122	-122	-102	0	-20	0	0	-1								
31	X	-51	0	+51	+132	+122	+204	+428	+560	+112	-387	-702	-489	-183	-61	+244	+214	+305	+81	-81	0	+61	0	+20	+81	+28								
MEANS ALL DAYS		+85	+42	+173	+81	+117	+257	+517	+532	+271	-238	-437	-504	-390	-206	+20	+204	+244	+218	+115	+174	+88	+14	+43	-2	+59								
MEANS 10 DAYS		+40	+89	+78	+99	+146	+226	+490	+650	+368	-157	-408	-459	-445	-265	-63	+147	+239	+220	+100	+101	+42	+17	-7	+21	+53								

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS 93.9										DIRECTION E 0° 5 N										MEAN			
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24										
1		- 72	0	- 38	+ 53	+ 57	+ 79	+ 340	+ 423	+ 189	- 284	+ 68	- 336	- 197	- 76	- 34	+ 98	+ 129	+ 268	+ 98
2		+ 76	- 246	- 397	- 295	- 212	- 98	- 42	+ 68	+ 170	+ 132	+ 76	+ 117	+ 79	- 140	- 34	+ 72
3	X	+ 76	+ 76	+ 113	+ 91	+ 113	+ 113	+ 257	+ 435	+ 227	- 132	- 261	- 265	- 193	- 68	- 34	- 102	+ 113	+ 265	+ 231	+ 284	+ 265	+ 204	+ 113	+ 102	+ 84	..	..	..	..	..	..	..	..	..	..
4	X	+ 144	+ 113	+ 268	+ 204	+ 189	+ 231	+ 302	+ 83	+ 110	+ 87	+ 151	+ 238	+ 83	- 15	- 60	- 310	+ 60	+ 91	+ 30	0	+ 30	+ 155	+ 79	+ 60	+ 97	..	..	..	..	..	..	..	..	..	..
5	X	+ 121	+ 166	+ 53	+ 121	+ 68	+ 189	+ 344	+ 567	+ 378	+ 19	- 174	- 212	- 287	- 76	+ 76	+ 378	+ 363	+ 261	+ 200	+ 151	+ 189	+ 265	+ 416	+ 223	+ 158	..	..	..	..	..	..	..	..	..	..
6	X	+ 257	+ 227	+ 204	+ 197	+ 132	+ 155	+ 227	+ 284	+ 151	+ 38	- 8	+ 125	+ 113	0	+ 170	+ 321	+ 272	+ 189	+ 257	+ 159	+ 144	+ 83	+ 151	+ 212	+ 169	..	..	..	..	..	..	..	..	..	..
7		+ 427	+ 227	+ 106	+ 200	+ 227	+ 117	+ 151	+ 257	+ 389	+ 185	0	- 110	+ 38	+ 72	+ 200	+ 170	+ 8	- 106	+ 38	+ 34	+ 106	+ 38	+ 53	+ 94	+ 122	..	..	..	..	..	..	..	..	..	..
8		+ 106	+ 121	+ 91	+ 91	+ 181	+ 151	+ 113	+ 72	- 132	- 306	- 68	- 98	+ 204	+ 472	+ 378	+ 318	+ 151	+ 231	+ 106	+ 83	+ 42	+ 94
9		..	..	..	..	..	..	..	..	+ 197	+ 121	+ 38	+ 246	+ 389	+ 212	- 919	- 284	- 223	+ 98	+ 340	+ 197	+ 117	- 76	- 132	- 45	+ 45	..	..	..	..	..	..	..	..	..	..
10		- 125	- 42	+ 45	+ 537	+ 113	+ 136	+ 280	+ 348	+ 344	+ 76	+ 170	- 185	- 223	- 212	+ 261	+ 113	+ 559	+ 355	+ 42	- 113	- 38	+ 106	+ 185	+ 117	+ 119	..	..	..	..	..	..	..	..	..	..
11		+ 159	+ 106	+ 113	+ 151	+ 185	+ 151	+ 310	+ 284	+ 231	+ 42	- 495	- 601	- 147	+ 19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12		..	..	..	..	..	..	..	..	+ 151	+ 249	- 151	- 276	+ 231	- 42	- 155	+ 265	- 45	+ 155	+ 510	+ 246	+ 132	- 435	+ 359	+ 15	..	..	..	..	..	..	..	..	..	..	..
13		- 94	+ 117	+ 219	+ 265	+ 204	+ 151	+ 314	+ 386	+ 813	+ 45	- 718	- 378	+ 117	+ 110	+ 299	+ 318	- 98	+ 181	+ 378	+ 208	- 223	+ 76	- 325	+ 302	+ 111	..	..	..	..	..	..	..	..	..	..
14		+ 170	- 185	+ 113	+ 189	+ 246	+ 197	+ 306	+ 268	+ 242	+ 53	- 19	+ 38	+ 68	+ 284	+ 299	+ 170	- 79	- 144	+ 38	- 19	- 106	- 45	+ 30	+ 38	+ 90	..	..	..	..	..	..	..	..	..	..
15		+ 45	+ 60	+ 15	+ 49	+ 113	+ 193	+ 302	+ 571	+ 227	- 181	- 53	- 197	- 151	- 110	0	+ 197	+ 382	+ 246	+ 147	+ 147	+ 299	+ 533	+ 340	- 454	+ 113	..	..	..	..	..	..	..	..	..	..
16		+ 601	+ 60	- 129	+ 53	- 113	+ 87	+ 839	+ 937	+ 280	+ 257	+ 514	+ 461	+ 185	+ 325	+ 321	+ 287	+ 556	+ 639	+ 179	+ 472	- 699	+ 227	+ 94	- 336	+ 296	..	..	..	..	..	..	..	..	..	..
17		- 261	- 370	+ 163	+ 170	+ 91	+ 215	+ 219	+ 609	+ 423	+ 238	0	- 219	- 457	- 261	- 19	+ 60	+ 159	+ 129	- 42	+ 38	+ 106	+ 68	+ 38	+ 19	+ 46	..	..	..	..	..	..	..	..	..	..
18		+ 19	+ 57	+ 38	+ 68	+ 265	+ 189	+ 302	+ 306	+ 204	+ 204	+ 38	- 57	+ 159	+ 144	+ 113	- 181	0	+ 106	+ 132	+ 110	+ 72	0	- 38	- 197	+ 86	..	..	..	..	..	..	..	..	..	..
19		- 144	- 45	+ 106	+ 204	+ 113	+ 181	+ 147	+ 832	+ 134	- 189	- 208	- 318	- 212	+ 30	+ 219	+ 98	+ 38	0	+ 45	- 38	+ 189	- 185	+ 8	0	+ 84	..	..	..	..	..	..	..	..	..	..
20		+ 204	+ 106	+ 38	- 68	+ 72	+ 159	+ 189	- 34	+ 140	+ 49	+ 38	+ 49	- 185	+ 136	+ 159	+ 57	- 53	+ 60	+ 144	0	+ 106	+ 38	+ 200	+ 76	+ 70	..	..	..	..	..	..	..	..	..	..
21		+ 110	+ 144	+ 76	+ 113	+ 408	+ 227	+ 318	+ 212	+ 38	+ 19	+ 155	- 110	- 185	- 129	+ 76	+ 450	+ 767	+ 227	+ 590	+ 731	+ 1009	- 696	- 227	- 60	+ 219	..	..	..	..	..	..	..	..	..	..
22		+ 129	+ 556	- 170	- 189	- 287	+ 363	+ 919	+ 733	+ 650	+ 446	+ 166	+ 510	+ 507	+ 212	+ 491	+ 472	+ 662	+ 847	+ 212	- 359	- 548	+ 673	- 930	- 484	+ 233	..	..	..	..	..	..	..	..	..	..
23		+ 975	- 684	- 253	- 231	- 416	+ 684	+ 30	- 287	- 219	- 113	+ 76	+ 181	+ 57	+ 45	+ 197	+ 287	+ 181	+ 333	- 340	- 189	+ 113	+ 136	0	- 170	+ 16	..	..	..	..	..	..	..	..	..	..
24		- 257	+ 197	+ 265	- 151	+ 435	- 19	+ 185	+ 340	+ 416	+ 272	- 121	- 189	+ 30	+ 189	+ 144	+ 181	+ 234	+ 159	- 185	+ 106	- 136	+ 76	+ 38	+ 106	+ 94	..	..	..	..	..	..	..	..	..	..
25	X	+ 83	+ 159	+ 30	+ 45	- 280	+ 91	+ 333	+ 495	+ 446	+ 231	+ 159	+ 30	- 329	- 359	- 68	+ 234	0	- 34	- 185	+ 76	+ 42	+ 38	- 125	- 68	+ 44	..	..	..	..	..	..	..	..	..	..
26	X	- 106	+ 68	+ 117	+ 185	+ 151	- 197	+ 231	+ 582	+ 563	+ 348	+ 42	- 19	- 374	- 420	- 257	- 60	+ 272	+ 94	+ 76	+ 265	- 76	- 193	- 68	0	+ 51	..	..	..	..	..	..	..	..	..	..
27	X	- 68	- 15	+ 19	- 94	+ 197	+ 189	+ 423	+ 643	+ 597	+ 106	+ 94	- 68	- 197	- 57	- 344	- 53	- 38	- 23	- 76	+ 117	- 30	- 76	- 38	- 45	+ 48	..	..	..	..	..	..	..	..	..	..
28	X	+ 23	+ 115	+ 68	- 170	+ 151	+ 113	+ 268	+ 514	+ 386	+ 321	+ 151	+ 8	- 234	- 181	- 151	- 299	- 219	+ 91	+ 106	+ 117	+ 102	- 53	- 60	- 42	+ 47	..	..	..	..	..	..	..	..	..	..
29	X	- 34	- 53	- 38	- 42	+ 181	+ 113	+ 197	+ 514	+ 408	+ 38	- 242	- 272	- 219	- 151	+ 79	+ 132	+ 227	+ 193	+ 57	+ 110	+ 94	+ 38	+ 113	+ 68	+ 63	..	..	..	..	..	..	..	..	..	..
30		- 64	+ 53	+ 19	+ 204	+ 79	+ 181	+ 287	+ 408	- 423	- 370	+ 38	+ 94	- 110	+ 170	+ 113	+ 268	+ 113	+ 79	- 68	- 30	+ 68	0	- 8	+ 26	+ 47	..	..	..	..	..	..	..	..	..	..
31	X	- 45	0	+ 38	+ 76	+ 45	+ 113	+ 234	+ 340	+ 257	- 83	- 185	- 45	+ 151	- 30	+ 53	- 15	+ 147	+ 110	+ 68	- 19	+ 45	+ 30	+ 49	+ 53	+ 58	..	..	..	..	..	..	..	..	..	..
MEANS		+ 87	+ 44	+ 61	+ 81	+ 100	+ 167	+ 304	+ 414	+ 327	+ 79	- 8	- 36	- 74	- 14	+ 93	+ 127	+ 185	+ 174	+ 123	+ 134	+ 45	+ 61	+ 4	- 14	+ 103	..	..	..	..	..	..	..	..	..	..
ALL DAYS																																					
MEANS		+ 45	+ 86	+ 87	+ 61	+ 95	+ 111	+ 282	+ 446	+ 352	+ 97	- 27	- 48	- 149	- 132	- 54	+ 23	+ 120	+ 124	+ 76	+ 126	+ 80	+ 49	+ 59	+ 56	+ 82	..	..	..	..	..	..	..	..	..	..
10 DAYS																																					

★ = 10 LEAST DISTURBED DAYS

TABLE 239

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT_NORTHERLY										LENGTH IN KMS										DIRECTION N 17° 8' E									
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	0	+182	+50	+131	+182	+222	+525	+918	+122	-747	-525	-686	-585	-293	+121	+303	+202	+121	-61	-81	0	-81	-81	+101	+2					
2		-81	0	+81	+101	+121	+293	+585	+908	+333	-343	-444	-414	-303	-353	-747	+101	+151	-40	0	+1362	+1261	+82	-383	+212	+203					
3		+182	-121	-121	+504	+283	0	+313	+414	+242	-313	-484	-303	-504	-484	+404	-141	-81	-61	+30	0	+111	+404	+101	+20	+16					
4		+101	+101	+121	+81	+61	+101	+303	+565	+323	-141	-303	-313	-283	-404	-151	+81	+81	+192	+81	0	0	0	+91	0	+29					
5	X	0	+50	+81	+81	+101	+111	+484	+605	+313	+101	-293	-605	-656	-313	-283	-121	+232	-91	0	0	0	+91	+161	+81	+5					
6		-111	+141	0	+101	+91	+161	+484	+646	+192	-353	-504	-424	-303	-535	+262	+121	+262	0	-91	0	+121	0	+161	+161	+24					
7		0	-131	-242	+212	+232	+293	+484	+696	+484	+192	-121	-303	-394	-323	-192	-40	+61	+202	+91	+101	0	+111	+202	+81	+71					
8		+192	+91	+182	-141	+91	+192	+605	+1049	+414	-121	-404	-464	-525	-484	-222	+61	-293	-141	+151	-91	-111	-101	+323	+686	+39					
9		+293	+404	+555	+131	+414	+283	+323	+424	+81	-161	-404	-424	-363	-121	-182	-161	+151	0	0	+404	+222	0	-313	+202	+73					
10		-101	+504	+212	+262	+121	+313	+545	+575	-101	-353	-262	-111	-222	-414	+111	+202	+202	-81	-192	-303	-101	+394	+202	+81	+62					
11		+343	+202	+222	+283	+313	+323	+615	+605	+111	-303	-121	-293	-222	-202	-101	+252	+242	-101	-81	+252	+81	-101	0	+161	+100					
12		-50	-151	+484	+131	+81	+242	+626	+615	+504	-121	-656	-726	-626	-444	+293	+303	+313	+272	-91	+101	+81	0	-20	0	+45					
13		+40	+20	+101	+101	+121	+303	+525	+686	+414	-91	-605	-716	-605	-404	-303	+121	+161	-101	-182	+283	+151	-111	-121	0	-9					
14	X	0	0	0	+202	+182	+373	+464	+747	+81	-313	-293	-252	-303	-252	-91	-61	+61	-50	-121	-50	0	0	0	+20	+14					
15	X	-20	+40	-40	0	+111	+131	+323	+484	+283	-252	-504	-484	-484	-353	-151	+111	+323	+20	0	+101	+81	+101	+161	+20	0					
16		0	+20	0	+111	+151	+20	+454	+383	+363	-101	-293	-394	-373	-262	-121	0	+222	+151	+121	+283	+383	+726	+454	+414	+113					
17		-222	+61	-202	-182	+202	+303	-504	+504	+232	+706	+283	+111	-101	+101	+353	-121	+81	+101	-202	-81	0	-81	+101	-101	+56					
18		-111	+101	+111	-161	+101	+182	+313	+313	+262	-303	-394	-464	-404	-242	-101	-40	+121	-40	+182	+202	-101	+363	+283	+40	+9					
19		-232	+515	+565	+182	+313	-212	+121	+121	-404	-394	-202	-293	-222	+262	+252	+424	+353	+202	+293	+313	+454	-464	+192	+1080	+44					
20		+716	-363	-373	+363	-81	-151	+202	+212	+293	+252	-242	-121	-303	-242	-111	-20	+101	-182	-101	+212	-212	+81	+50	-262	-22					
21		-313	+81	+353	-81	+111	-121	+20	+283	+383	-111	-454	-424	-202	-91	-151	+161	+40	+111	+40	-81	-101	+101	-323	-81	-35					
22	X	-111	-101	+222	+182	-484	+192	+353	+404	+595	0	0	-343	-202	-182	+111	-202	-222	-151	-212	-101	-111	0	0	-15						
23	X	-101	+121	0	+20	+111	+121	+454	+504	+323	-111	-525	-545	-414	-202	+111	0	+91	-91	0	+101	+101	+121	-121	+303	+16					
24	X	+121	+121	-40	-81	-202	+40	+383	+525	+283	-192	-424	-565	-484	-242	-303	0	+101	+101	+20	0	0	+81	-212	+202	-32					
25		-40	-101	+151	+212	+111	+242	+323	+494	+726	-202	-706	-737	-525	-252	-252	+101	+615	-101	0	0	+686	+222	0	0	+40					
26		+40	+101	-101	+141	+81	+101	+323	+605	+363	0	-414	-484	-504	-303	-202	+101	0	0	-101	-61	-20	0	-20	0	-15					
27	X	+61	+101	+101	+81	+101	+101	+303	+303	+444	+323	-404	-696	-494	+101	-20	0	-20	0	+40	-111	-111	-81	-91	-81	0					
28	X	+212	-101	0	+30	+101	+192	+414	+615	+394	-293	-545	-504	-404	-212	-50	+50	0	-101	-40	-20	-40	-91	-91	-81	-24					
29	X	-61	-50	+40	+111	+81	+111	+383	+444	+283	-212	-494	-565	-484	-182	-121	+81	+40	+101	+81	-81	0	+101	0	0	-17					
30		0	+111	+111	+151	+414	+202	+313	+252	+293	+283	-141	-414	-515	-202	-212	-40	-383	+71	-101	-121	-61	+50	-40	-20	+19					
MEANS ALL DAYS		+25	+65	+87	+99	+121	+155	+369	+530	+288	-126	-366	-432	-400	-251	-67	+54	+132	+10	-15	+84	+92	+64	+22	+36	+24					
MEANS 10 DAYS		+10	+36	+41	+76	+28	+159	+409	+555	+312	-170	-401	-524	-451	-213	-64	+16	+81	-14	-29	-24	-8	+24	-27	+56	-5					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LINE	OW	LENGTH IN KMS										93.9										DIRECTION										E 0°.5 N
		EASTWARD												KMS																														
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																				
1	X	- 32	+158	+ 32	+ 75	+122	+154	+375	+750	+348	-257	-118	-213	-269	-111	+ 67	+166	+ 95	+ 71	- 32	-126	+ 43	- 32	- 71	+158	+ 56																		
2		- 79	- 32	+ 63	+ 63	+111	+158	+332	+596	+261	- 32	+ 47	- 8	- 32	- 99	-640	+261	+107	+170	+178	+201	+841	+138	-529	+261	+139																		
3		+356	-201	-375	+478	+482	-174	+253	+466	+261	+154	-111	+122	-107	-134	+636	-356	- 71	0	+201	+320	+ 40	+ 40	+ 43	+ 47	+ 99																		
4		+ 79	+ 83	+ 83	+ 71	0	+ 51	+166	+442	+434	+178	+122	+ 83	+ 32	-115	- 40	- 63	- 47	+ 71	+ 40	+ 63	+ 40	+ 47	+158	+ 79	+ 86																		
5	X	+ 63	+115	+118	+115	+ 99	+126	+296	+529	+442	+427	+118	- 71	- 91	0	-115	-126	+395	- 47	-237	- 83	0	+ 99	+257	+ 99	+105																		
6		- 59	+229	+158	+178	+201	+229	+387	+517	+190	- 59	-138	- 79	- 16	+213	+363	+118	+292	- 79	-146	+111	+ 20	+174	+229	+241	+136																		
7		+ 75	+ 36	- 47	+174	+257	+276	+292	+612	+573	+506	+324	+ 71	-174	-126	-217	-122	-111	+122	+ 99	+217	+134	+201	+205	+ 87	+144																		
8		+201	+118	+205	- 32	+ 79	+134	+363	+833	+672	+205	+ 40	-115	-205	-229	-154	+ 51	-308	- 87	+458	+134	- 99	+115	+553	+766	+154																		
9		+494	+241	+296	+ 55	+221	+158	+340	+245	+273	+190	+150	+ 67	+138	+111	-320	-498	-296	- 55	+126	+506	+316	-257	-498	+ 79	+ 87																		
10		-225	+213	+ 71	+118	+ 12	+201	+399	+664	+233	+118	+ 99	+257	+ 8	-387	-178	+ 59	- 40	- 79	-115	-241	- 83	+158	+ 79	-142	+ 50																		
11		+201	+ 16	+ 32	+ 83	+158	+ 83	+296	+569	+427	+ 79	+ 47	-103	-126	-276	-150	-115	+ 71	- 40	+ 40	-190	+269	- 63	- 16	+ 63	+ 56																		
12		+ 40	-154	+221	+ 8	- 40	+ 79	+415	+648	+632	+ 95	-336	-356	-454	-340	+221	- 16	+205	+280	- 59	+ 43	+ 40	+ 43	0	+ 20	+ 51																		
13		0	+ 8	+ 71	+ 40	- 47	+241	+336	+608	+585	+269	-115	-324	-363	-379	-316	+ 63	+ 83	- 55	- 63	+198	+363	-142	-126	- 43	+ 37																		
14	X	- 43	- 91	-138	+118	- 40	+ 59	+166	+470	+178	+118	+126	+154	+ 40	+ 83	- 40	- 99	-118	-126	-194	-115	- 79	- 32	+ 71	+ 75	+ 23																		
15	X	+ 20	+ 47	0	+ 47	+158	+142	+178	+458	+359	+ 67	- 55	- 75	-103	- 71	- 95	+ 87	+320	-198	- 83	+ 40	+ 40	+ 95	+118	+ 32	+ 64																		
16		0	- 47	- 83	+ 79	+ 47	- 40	+209	+280	+217	+126	+146	+122	- 63	- 87	- 63	- 99	+ 55	+ 32	+162	+454	+533	+893	+786	+656	+180																		
17		-178	+ 75	- 43	-205	- 43	+229	-269	+257	+608	+1382	+1003	+557	+494	+138	+431	-201	-217	- 63	-371	-154	-115	-158	0	-103	+127																		
18		-111	+ 40	+ 71	-194	+ 40	+ 79	+126	+308	+233	- 32	- 75	-138	-198	-154	- 83	- 59	+ 47	+ 32	+194	+273	-138	+280	+150	+178	+ 36																		
19		-304	+415	+253	-205	+158	-118	-158	+371	+150	-150	-107	+178	+118	+458	+269	+403	+514	+186	+446	+166	-367	- 59	+158	- 87	+112																		
20		+138	-126	-446	+ 47	+ 4	- 79	+138	+111	+312	+237	- 47	- 63	-237	-118	- 79	-103	+ 55	-198	-115	-122	-111	+ 79	+ 51	-138	- 34																		
21		-253	- 47	-138	- 16	- 16	-142	- 59	+249	+427	+ 55	- 71	-194	- 99	+ 59	- 79	+ 83	- 47	+ 28	+ 51	-138	- 79	+ 40	-276	- 36	- 29																		
22	X	- 71	- 99	+111	+126	-363	+ 79	+150	+300	+656	+122	+134	+ 32	- 79	- 47	+269	-178	-276	-182	-174	-118	-126	0	- 55	- 63	+ 6																		
23	X	- 91	+ 16	- 16	- 12	+ 32	0	+126	+359	+316	+122	-205	-237	-205	- 59	+162	- 99	+ 32	+ 40	+118	+221	+229	0	-134	+213	+ 39																		
24	X	+ 51	- 59	-194	- 55	-111	+ 40	+221	+490	+340	+ 40	-178	-213	-205	-130	-269	-194	-138	-154	- 55	- 79	- 40	+ 24	-237	+126	- 41																		
25		-111	-213	- 47	+ 43	+178	+ 40	+158	+356	+754	+166	-198	-446	-296	- 47	-130	+ 59	+577	+138	- 36	+237	+885	+ 55	-237	- 36	+ 62																		
26		- 87	- 55	-245	- 75	- 47	+ 71	+213	+434	+434	+209	- 71	- 59	-324	-308	-225	- 59	-166	+ 40	- 95	- 79	- 40	+ 40	- 47	- 24																			
27	X	- 79	- 32	- 40	- 43	- 40	- 36	+138	+237	+490	+506	- 40	-470	-280	+115	- 79	-126	- 20	+201	+ 99	-122	- 95	- 40	- 40	- 71	+ 6																		
28	X	+118	- 24	- 32	0	+ 40	+ 83	+213	+482	+344	+ 40	-198	-276	-241	-213	- 87	- 36	0	+ 40	- 40	- 40	0	- 40	0	0	+ 6																		
29	X	- 95	- 36	- 71	+ 79	- 16	+ 16	+ 43	+245	+296	+ 47	- 99	-205	-237	- 36	- 40	+ 91	+111	+ 95	+ 32	- 47	0	+ 63	- 40	+ 32	+ 10																		
30		+ 43	+118	+ 40	-158	+269	+198	+245	+217	+356	+336	+ 36	+ 95	+ 40	+213	-312	0	+395	- 43	-154	-233	-194	0	- 47	- 71	+ 58																		
MEANS ALL DAYS		+ 2	+ 24	- 3	+ 33	+ 52	+ 78	+203	+437	+393	+175	+ 8	- 64	-118	- 69	- 43	- 37	+ 50	+ 5	+ 9	+ 77	+ 74	+ 59	+ 17	+ 79	+ 60																		
MEANS 10 DAYS		- 16	0	- 23	+ 45	- 12	+ 66	+191	+432	+377	+123	- 52	-157	-167	- 47	- 23	- 51	+ 40	- 26	- 57	- 47	- 3	+ 14	- 13	+ 60	+ 27																		

* = 10 LEAST DISTURBED DAYS

TABLE 241

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										N 17° 8' E	MEAN
		NORTHERLY					LINE OM					58.4					58.4					58.4											
1		- 61	-102	- 20	0	+ 20	+ 41	+306	+306	+255	+112	-306	-735	-612	-306	+184	+286	+214	+194	+112	+163	+102	+122	0	0	+ 12							
2		0	- 61	0	+ 31	+ 51	+112	+306	+449	+418	+255	-122	-367	-347	-204	-245	-112	-204	- 82	+204	+ 41	+153	+204	+112	+133	+ 30							
3		+551	+112	+969	-102	-327	-510	+286	-357	+480	+327	-163	-633	-459	-102	+571	+694	+306	+245	-255	+1470	+1325	-623	-816	-306	+150							
4		-112	-102	-184	-204	0	0	+163	+418	+408	0	-153	-388	-500	-143	-418	0	- 92	+214	0	- 41	0	0	-122	+184	- 45							
5		- 92	+112	+102	-388	-306	0	-204	-398	+398	+ 92	-204	-255	+286	-357	-184	- 82	+ 82	+725	+112	+225	+623	+551	-551	+459	+ 90							
6		+418	-776	+ 51	+ 41	-184	- 92	+122	+102	- 20	-122	-459	-520	-255	+306	-102	- 51	-112	-184	- 92	-143	-102	- 20	- 71	+102	- 90							
7		- 51	- 31	-122	-112	- 92	+ 51	+225	+184	+439	-102	-265	-204	- 71	+429	+286	+388	0	+102	+245	+367	-306	- 82	0	+102	+ 58							
8		- 92	+163	+ 61	+ 20	+ 81	+184	+327	+306	+286	+143	-245	-286	-316	-306	+ 71	-163	-184	-255	+ 41	- 20	+112	+ 61	+ 31	+510	+ 22							
9		-429	+1000	- 51	-112	-102	+214	-480	+102	+316	-245	-296	-225	+ 20	+ 31	+102	+214	+122	- 92	0	0	0	- 51	- 20	- 41	- 1							
10		0	0	0	0	+102	+102	+265	+357	+225	- 51	-255	-316	-163	+102	+102	+143	-408	-102	-102	- 92	-316	+ 82	- 61	+ 92	- 12							
11		+ 92	+112	+ 82	+153	+214	+204	+408	+184	+194	-122	-612	-459	-214	+122	+112	+459	+327	- 20	+194	+122	+ 92	+102	0	0	+ 73							
12		+ 31	+ 92	0	+ 41	+102	+184	+316	+327	+122	-112	-316	-500	-357	-153	+153	+204	+184	+102	+194	+1378	-204	-306	+1225	+347	+ 12							
13		+1235	-112	-194	+184	+143	+194	+265	+357	-214	+490	-184	-286	+204	+1266	+755	+1286	+582	+ 61	0	+561	+1041	+112	-296	+306	+323							
14		+296	-878	+1052	-612	+316	-714	+694	+429	+439	+102	-490	-929	-653	+ 92	-112	+ 71	+357	+735	+1817	+969	-714	-357	-347	-459	+ 46							
15		+ 10	-143	-388	-418	-112	+367	+510	+388	+143	-347	-184	-510	-469	-112	+163	+255	+204	+184	-102	+ 92	+204	+204	-296	-255	- 26							
16		+102	-327	+112	+163	+ 41	-184	+225	+112	+520	- 92	-367	0	-143	+214	+112	+316	-153	-102	+204	+531	-143	- 92	-796	+520	+ 32							
17		+112	-204	-296	-582	-102	+500	+388	+245	+112	-408	+ 51	- 41	-459	+112	- 51	0	+112	+ 82	+286	+612	+ 41	+225	+112	-153	+ 29							
18		- 82	- 92	-418	-755	+102	-102	+122	+306	+102	+ 82	+225	-153	+102	+327	+ 41	+102	+306	+204	0	+184	+255	-143	+357	+ 10	+ 45							
19		+153	+112	-153	-408	-265	-153	0	- 82	- 51	-316	-122	+306	+102	+112	+214	- 41	+ 41	0	+ 82	-102	- 82	+ 61	+102	+204	- 12							
20	X	+163	-112	-102	-337	+102	0	+204	+327	+163	-204	-255	-286	-122	- 82	0	0	- 92	-194	0	+ 82	+ 82	+102	+ 31	- 92	- 26							
21		+102	+ 61	+112	0	- 20	+102	+102	+122	+388	0	-112	-184	-459	-194	-153	+500	+102	- 82	+102	+102	0	0	0	+122	+ 30							
22	X	+184	+ 61	0	0	0	+ 51	+316	+510	+327	-184	-510	-612	-520	-194	+133	-112	+102	+102	+ 82	+ 92	+ 82	0	+ 51	0	- 2							
23		+ 92	+510	+255	+102	- 51	+ 51	+102	+347	+102	- 92	-214	-112	- 92	+153	+122	+214	+102	+122	-214	-112	- 61	-102	- 82	-102	+ 43							
24	X	+102	+ 61	+102	+102	+102	+ 61	+286	+623	+429	+102	-286	-388	-316	-306	- 31	- 51	-102	-112	+112	+122	-102	+102	-184	-102	+ 14							
25	X	- 41	+102	+ 82	+122	+204	+102	+327	+490	+388	+ 92	-255	-418	-469	-255	-184	- 92	-102	+ 41	+122	- 41	- 92	0	-102	- 92	- 3							
26	X	0	+143	0	0	0	+ 82	+204	+429	+286	-122	-296	-337	-449	-306	+143	0	0	+102	+ 92	0	0	- 92	-102	- 92	- 13							
27	X	-122	- 82	- 61	- 20	- 41	+102	+408	+531	+367	+ 82	-265	-520	-367	-316	-112	0	+102	+102	+102	0	+ 61	+ 61	+102	+194	+ 13							
28	X	+ 82	-143	- 92	+194	-102	+316	+296	+388	+296	- 61	-316	-490	-388	-102	- 82	+153	+194	0	+102	+459	+490	0	- 61	- 82	+ 44							
29	X	-214	-102	-102	-306	0	0	+184	+296	+316	- 82	-102	-102	-214	- 82	-102	+ 92	+ 20	+306	+245	+184	+112	-153	-102	+ 51	+ 6							
30	X	-112	-102	-102	0	0	-112	+112	+102	+122	- 20	- 51	-122	- 82	+163	- 61	0	+153	+ 61	+143	-204	0	+ 20	-184	-102	- 16							
31	X	-102	+184	0	-112	-102	- 61	+ 20	0	+184	0	- 20	0	0	+102	+143	+102	0	+ 61	+214	+ 51	+ 51	+102	+ 61	+ 61	+ 39							
MEANS		+ 71	- 18	+ 23	-107	+ 12	+ 35	+220	+281	+256	- 26	-231	-325	-221	+ 0	+ 51	+154	+ 70	+ 81	+130	+139	+ 87	+ 3	- 65	+ 49	+ 28							
ALL DAYS																																	
MEANS		- 6	+ 1	- 28	- 36	+ 16	+ 54	+236	+370	+289	- 40	-236	-328	-293	-138	- 15	+ 9	+ 28	+ 47	+121	+ 74	+ 68	+ 14	- 49	- 26	+ 6							
10 DAYS																																	

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										E 0°.5 N
		EASTWARD					LINE					OW					93.9					DIRECTION										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN						
1	X	- 47	- 47	- 39	- 59	+ 31	- 47	+ 43	+ 271	+ 204	+ 295	- 20	- 161	- 181	- 110	+ 78	+ 71	- 20	+ 78	0	0	- 39	+ 47	- 16	- 43	+ 12						
2		- 39	- 122	- 83	- 43	- 43	+ 16	+ 126	+ 110	+ 271	+ 196	+ 173	+ 98	+ 55	- 63	- 86	- 153	- 240	- 94	+ 181	+ 24	+ 153	+ 193	+ 118	+ 71	+ 34						
3		+ 452	+ 255	+ 472	- 59	- 346	- 330	+ 554	- 385	+ 55	+ 519	+ 362	+ 47	+ 943	+ 71	+ 707	+ 252	+ 126	+ 633	+ 770	+ 1442	+ 1258	- 692	- 982	- 424	+ 238						
4		- 161	- 200	- 157	- 216	- 39	+ 47	+ 71	+ 204	+ 255	+ 110	+ 78	- 43	- 259	- 39	- 314	+ 47	- 63	+ 283	- 35	- 118	- 78	- 126	- 244	+ 138	- 36						
5		- 78	- 16	- 39	- 334	+ 83	+ 149	- 193	+ 204	+ 393	+ 161	+ 114	+ 228	+ 680	- 452	- 181	- 4	+ 118	+ 766	+ 204	+ 444	+ 770	+ 472	- 857	+ 680	+ 139						
6		+ 424	- 979	- 78	- 216	- 157	- 200	- 55	+ 55	+ 149	+ 31	- 157	- 287	+ 149	+ 538	- 185	- 39	- 75	- 83	- 94	- 141	- 55	+ 43	+ 31	+ 110	- 53						
7		- 35	- 43	- 78	- 149	- 43	- 244	+ 236	+ 409	+ 660	+ 432	+ 59	+ 78	+ 138	+ 570	+ 196	+ 240	- 220	+ 157	+ 283	+ 90	- 194	- 122	- 43	+ 55	+ 101						
8		- 126	+ 39	- 24	- 31	+ 43	+ 126	+ 204	+ 161	+ 240	+ 196	- 157	- 94	- 153	- 196	+ 212	- 118	+ 86	+ 59	+ 236	+ 43	+ 43	- 98	- 43	+ 590	+ 52						
9		- 924	+ 1018	+ 20	- 102	- 47	+ 232	- 381	+ 128	+ 299	0	- 39	+ 94	+ 275	- 63	+ 43	+ 181	+ 177	0	- 24	- 31	- 31	- 43	+ 43	+ 59	+ 37						
10		+ 71	+ 71	+ 47	+ 20	+ 153	+ 94	+ 279	+ 199	+ 193	+ 8	- 149	- 126	+ 20	+ 78	+ 110	+ 200	- 236	- 59	- 51	- 83	- 314	+ 59	- 79	- 35	+ 19						
11		- 35	- 39	- 71	+ 75	+ 118	+ 47	+ 196	+ 39	+ 59	+ 8	- 275	- 354	- 118	+ 24	+ 59	+ 542	+ 314	- 43	- 59	+ 114	+ 134	+ 71	+ 16	0	+ 34						
12		+ 39	0	- 71	- 20	+ 39	+ 71	+ 138	+ 153	+ 55	+ 75	- 118	- 181	- 118	- 126	- 35	+ 47	+ 110	+ 110	+ 83	- 998	+ 110	- 181	+ 1195	+ 487	+ 36						
13		+ 1372	- 228	- 255	+ 152	+ 55	- 63	+ 126	- 16	- 354	+ 184	+ 531	+ 986	+ 334	+ 1320	+ 1006	+ 1438	+ 479	- 503	- 299	+ 468	+ 346	+ 432	+ 47	- 330	+ 322						
14		+ 1081	- 1006	- 715	- 196	+ 157	+ 177	+ 196	+ 440	+ 204	+ 550	- 259	- 629	- 365	+ 177	- 432	- 122	+ 354	+ 314	+ 1631	+ 554	- 138	+ 1427	- 751	+ 1230	+ 222						
15		+ 342	- 196	- 334	- 275	- 153	+ 43	+ 181	+ 267	+ 487	- 287	+ 79	- 220	- 220	+ 31	+ 79	+ 173	+ 79	- 314	- 138	+ 157	+ 94	+ 43	- 177	- 118	- 16						
16		- 47	- 196	- 177	+ 71	+ 67	- 236	+ 444	+ 126	+ 849	+ 98	- 236	+ 252	+ 83	+ 161	+ 141	+ 216	- 275	- 295	+ 102	+ 456	- 157	- 141	- 943	+ 519	+ 37						
17		+ 165	- 98	- 212	- 377	- 161	+ 224	+ 216	+ 161	+ 570	- 275	+ 157	+ 491	- 468	+ 287	+ 79	+ 83	- 43	- 94	+ 208	+ 503	- 8	+ 118	+ 83	- 432	+ 41						
18		+ 79	- 43	- 200	- 629	- 71	+ 75	+ 83	+ 271	+ 173	+ 47	+ 330	+ 39	+ 153	+ 432	- 39	+ 71	+ 314	+ 43	- 71	+ 79	+ 102	- 157	+ 456	+ 75	+ 67						
19		+ 47	+ 75	- 452	- 208	- 173	- 35	+ 20	- 110	- 71	- 165	- 16	+ 432	+ 479	+ 232	+ 157	- 110	- 47	- 86	+ 20	+ 24	- 71	+ 157	- 39	- 283	- 9						
20	X	+ 43	- 39	- 71	- 216	- 157	- 200	- 157	- 440	+ 196	+ 39	- 39	- 43	0	+ 8	- 24	- 63	- 75	- 138	- 39	0	+ 118	+ 67	+ 79	- 98	- 52						
21		+ 79	- 94	+ 75	0	- 35	+ 447	+ 157	+ 47	+ 196	+ 98	+ 75	+ 275	- 216	- 193	+ 90	+ 550	+ 177	- 208	- 114	- 20	0	0	+ 31	+ 63	+ 45						
22	X	+ 157	+ 39	- 43	- 39	- 47	- 39	+ 138	+ 350	+ 307	+ 55	- 200	- 338	- 255	+ 39	+ 79	- 153	+ 47	+ 24	- 43	0	+ 63	- 47	+ 110	+ 20	+ 9						
23		- 39	+ 138	+ 110	+ 24	- 8	+ 303	+ 145	+ 177	+ 393	+ 43	- 157	+ 31	+ 83	+ 181	+ 157	+ 240	+ 141	+ 39	- 232	- 114	0	- 47	- 71	+ 24	+ 65						
24	X	- 122	0	- 31	- 59	- 47	- 55	+ 51	+ 228	+ 354	+ 134	- 118	- 141	- 196	- 240	- 35	- 86	- 35	- 43	+ 102	+ 83	- 47	+ 71	- 114	- 47	- 16						
25	X	+ 59	+ 31	- 31	- 31	+ 106	+ 20	+ 126	+ 318	+ 263	+ 240	+ 79	- 75	- 271	- 236	- 189	- 193	- 153	- 24	+ 59	- 39	- 43	+ 47	- 43	0	+ 1						
26	X	+ 79	+ 79	+ 110	+ 71	0	+ 39	+ 138	+ 267	+ 236	+ 75	+ 20	- 20	- 79	- 83	+ 110	- 55	+ 8	+ 71	+ 55	+ 59	+ 63	+ 63	0	0	+ 54						
27	X	- 102	- 35	- 20	- 20	- 79	+ 43	+ 236	+ 350	+ 346	+ 193	+ 157	- 275	- 193	- 153	- 79	- 43	- 35	+ 39	- 51	- 35	0	+ 43	+ 134	+ 83	+ 21						
28	X	+ 20	- 75	- 94	+ 63	0	+ 189	+ 177	+ 157	+ 271	+ 200	+ 63	- 193	- 122	- 43	- 35	+ 118	+ 177	- 43	+ 157	+ 550	+ 448	- 161	- 177	- 43	+ 67						
29	X	- 126	- 114	- 75	- 220	- 43	- 39	+ 79	+ 126	+ 118	0	+ 98	+ 189	- 39	+ 39	- 161	- 75	+ 12	+ 314	+ 275	+ 196	- 28	- 149	- 86	+ 35	+ 14						
30	X	- 114	- 79	- 90	- 31	- 47	- 94	0	0	+ 118	+ 35	+ 122	+ 157	+ 31	+ 224	+ 79	+ 126	+ 240	0	+ 47	- 216	+ 39	+ 8	- 118	+ 39	+ 20						
31	X	- 118	+ 118	+ 28	- 83	- 118	- 83	0	- 161	+ 31	+ 94	+ 83	+ 90	- 39	+ 134	+ 240	+ 200	+ 193	+ 157	+ 196	+ 212	+ 79	+ 149	+ 47	+ 79	+ 64						
MEANS		+ 77	+ 58	- 37	- 101	- 31	+ 9	+ 115	+ 132	+ 243	+ 125	+ 21	+ 10	+ 4	+ 82	+ 59	+ 116	+ 53	+ 34	+ 108	+ 119	+ 84	+ 50	- 77	+ 81	+ 51						
ALL DAYS																																
MEANS 10 DAYS		- 22	- 8	- 32	- 56	- 43	- 22	+ 79	+ 120	+ 224	+ 101	+ 26	- 65	- 116	- 31	- 2	- 22	+ 38	+ 36	+ 76	+ 81	+ 69	+ 9	- 17	+ 7	+ 18						

* = 10 LEAST DISTURBED DAYS

TABLE 243
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

NOVEMBER 1939

NOVEMBER 1939

DAY	*	COMPONENT NORTH-EAST										LENGTH IN KMS 58.4										DIRECTION N 17° 8' E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+ 51	- 51	-102	- 51	-418	+285	+204	+326	+224	+143	-204	-194	-204	-112	+112	-102	- 82	- 92	+ 92	+ 20	+143	+214	+183	+194	+ 24					
2	X	- 92	-163	-204	-194	- 82	0	+102	+204	+306	- 20	-122	-214	-204	-194	+ 20	+ 82	- 82	0	+122	- 92	+ 61	0	+214	+ 82	- 20					
3		- 82	-194	-204	+102	-428	-102	+245	+459	+316	- 51	-112	-397	-194	-112	+112	+204	+204	+ 92	+183	+285	+183	+102	+214	+153	+ 41					
4		+214	+102	- 51	+122	- 20	+ 82	+204	+296	+183	-122	-245	-112	-112	+143	+143	+194	+296	+112	+102	+194	+143	+ 92	+102	+102	+ 90					
5	X	+112	+194	-102	+459	+102	+214	+357	+306	+183	0	- 82	-102	-245	- 41	0	- 41	0	- 20	-112	- 51	0	+ 31	+102	+204	+ 61					
6		+ 82	+102	+102	+122	+102	+102	+306	+224	+102	0	-265	-408	-102	+204	+102	- 51	+316	- 61	+ 61	+143	0	0	0	0	+ 49					
7	X	- 31	+102	- 31	+102	0	0	+245	+306	+489	-112	-346	-183	+ 92	0	+224	+296	+153	+112	+102	+ 51	+102	+102	+102	0	+ 78					
8		+ 20	+214	- 82	+316	+204	+153	+122	+499	+418	+102	-214	-387	-357	-112	- 61	- 51	+ 51	0	+ 41	0	+255	0	- 20	- 31	+ 45					
9	X	-102	0	-122	+163	+102	+ 92	+153	+397	+296	- 31	-306	-214	-183	-122	0	+122	0	+102	0	+ 92	+ 31	+ 82	-102	-102	+ 14					
10	X	-102	- 51	-112	+102	+ 51	+112	+194	+418	+387	+163	-204	-306	-224	-122	+122	+194	+204	+194	+183	+143	0	- 51	-102	-102	+ 45					
11		-102	0	- 92	+102	+102	+163	+153	+387	+163	0	-224	-306	-336	-163	+163	+112	+163	+112	+306	+102	- 82	- 51	- 20	- 20	+ 26					
12		-102	-102	- 61	+ 82	-194	+387	+285	+408	+408	+102	-102	-255	-316	-122	-112	- 41	+112	+489	+581	+224	+223	-112	-102	- 61	+109					
13		+805	-296	-306	-224	+560	-102	-428	+163	+469	+459	+143	- 61	+ 82	+408	-326	-102	0	+306	+520	+ 61	+418	+102	-153	-285	+ 92					
14		-296	-316	- 61	-489	+102	+183	+255	+428	+520	+102	-102	-357	-204	-143	-153	+204	- 82	+ 71	+285	+132	+102	-102	0	- 51	+ 1					
15	X	-285	-194	- 61	- 82	- 82	- 51	- 82	+397	+530	+ 82	-112	-296	-204	-306	-183	- 51	0	+ 92	+132	+ 51	+102	0	- 61	-102	- 32					
16		-102	-122	- 20	-102	0	- 61	+102	+510	+285	+102	- 20	-255	-306	-122	- 51	- 82	+194	+214	+153	+102	+204	+204	+102	+102	+ 43					
17		0	+ 61	- 82	+ 51	- 51	+102	+132	+255	+224	+194	- 82	-316	-102	- 51	-102	0	+112	+102	+ 61	+ 41	+102	+143	0	+ 20	+ 34					
18	X	0	-102	+122	+143	+ 20	+ 82	+112	+204	+285	+153	-102	-296	-285	-296	-224	-122	- 82	+ 82	0	+ 20	+ 82	0	0	- 82	- 12					
19		- 94	-102	- 41	0	+ 20	0	+224	+255	+214	+540	0	-296	-285	-122	-102	+ 20	+102	+397	0	+194	+102	0	+265	-102	+ 50					
20	X	- 41	- 51	+ 20	0	- 41	- 31	+ 92	+326	+357	+214	-204	-469	-112	-102	+132	0	- 82	0	0	+112	+ 92	+102	0	+112	+ 18					
21	X	-143	+102	- 92	- 82	-102	+102	+102	+265	+194	+ 41	-204	-418	-367	-122	- 82	+ 41	0	+102	+102	0	+ 61	- 82	- 82	- 82	- 31					
22		- 20	-102	0	- 41	- 20	- 82	+ 41	+102	+ 82	- 82	-204	-204	-194	-112	- 20	-204	0	- 82	0	0	+102	-214	-102	-112	- 61					
23		-102	-143	-102	-112	- 92	-102	- 82	- 41	+122	+183	+102	+ 20	-102	-102	-214	-112	-102	+102	+102	+143	+132	+204	+112	-102	- 12					
24		- 92	- 82	0	+102	+ 92	0	+ 41	+112	+285	+408	+316	+173	+540	+448	+367	+175	- 50	+200	+488	+300	+188	+263	+801	0	+211					
25		-275	-282	+156	+ 63	- 63	-238	-175	- 63	-194	-244	- 56	-144	-257	+282	+307	+351	+131	+169	+257	- 69	+ 63	-219	+300	-131	- 13					
26		+ 69	-288	-695	+376	-125	+119	+119	+113	+182	+150	+125	- 81	-119	-156	-188	-194	0	+ 75	+ 94	+ 69	+200	+194	-207	-119	- 12					
27		-194	-200	- 69	- 31	-282	+188	+125	+313	+219	+219	+100	-244	-407	-156	-175	- 56	+ 50	+ 75	+ 50	+ 63	+ 63	+207	-131	- 56	- 14					
28	X	-100	- 63	+ 63	-263	+ 63	+188	- 13	+ 94	+250	+188	- 69	-131	-369	-257	-188	- 69	+ 63	+250	+188	+250	+131	+150	+119	0	+ 20					
29		+ 63	+ 63	-250	+388	+207	+200	+ 69	+313	+125	+213	+ 63	- 69	- 63	- 44	- 81	-313	- 75	+188	+188	+125	+175	0	- 69	+ 69	+ 62					
30		+188	+ 63	+ 25	0	- 31	+136	+113	+113	+125	+138	+150	- 69	-257	- 69	-219	+ 69	+ 94	+ 94	+175	+125	+ 38	0	+150	-257	+ 37					
MEANS ALL DAYS		- 26	- 63	- 82	+ 37	- 10	+ 71	+111	+270	+258	+108	- 86	-220	-180	- 59	- 23	+ 16	+154	+116	+149	+ 94	+147	+ 45	+ 54	- 25	+ 31					
MEANS 10 DAYS		- 80	- 23	- 52	+ 35	+ 3	+ 71	+126	+292	+328	+ 68	-175	-263	-210	-156	- 18	+ 45	+ 17	+ 91	+ 72	+ 58	+ 66	+ 33	+ 19	- 7	+ 14					

* = 10 LEAST DISTURBED DAYS

NOVEMBER 1939
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
NOVEMBER 1939

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 82	- 93	0 - 47	-354	+194	+152	+265	+253	+233	+ 58	+101	-159	-101	+187	+ 12	+ 39	0	+ 62	+ 78	+187	+408	+156	+175	+ 72	
2	X	- 58	-124	-159	-163	- 39	+ 19	+ 78	+124	+148	+ 47	0 - 39	- 35	-117	0 - 16	+ 47	+117	+ 70	+ 58	+109	+ 31	+ 39	+148	+ 23	+ 14	
3		0	- 39	-187	- 31	-117	-284	+ 86	+253	+272	+109	+ 78	-163	- 97	- 39	+ 43	+ 58	+156	-113	+ 47	+109	0 - 43	+ 58	+ 47	+ 26	
4		+109	+113	- 39	- 66	+ 31	0	+ 70	+187	+140	- 16	-109	+ 54	+109	+ 66	+ 47	+ 23	+ 47	- 78	-156	+ 39	0	+ 43	+ 58	+ 47	
5	X	+ 19	+ 78	-156	+447	0	+163	+206	+156	+171	+ 66	0 + 78	- 86	- 86	0 + 31	- 31	- 39	- 78	-117	- 82	+ 43	0	+132	+ 42		
6		+113	0 - 16	+ 12	0	+ 93	+194	+233	+233	+253	+ 51	-152	+ 78	+237	+ 78	+ 78	0	+405	- 31	0 + 70	+ 78	+ 31	+121	+117	+ 92	
7	X	+109	+144	+156	+117	+179	+148	+272	+288	+459	+280	-144	-109	0 - 31	+109	+121	+ 43	+ 39	- 39	- 43	0 + 31	+ 39	+ 19	+ 91		
8		0	+ 47	- 62	+117	+159	+159	+117	+296	+389	+191	- 8	-124	-194	- 62	-171	- 43	0 - 74	- 19	+ 8	+117	+159	- 23	- 31	+ 40	
9	X	-152	+ 39	-175	-152	+292	+319	+241	+311	+292	+230	+109	+ 62	+ 43	- 78	- 93	- 39	-253	- 70	-230	-140	- 35	+ 35	-113	-124	+ 13
10	X	- 19	+ 58	+ 74	+230	+237	+268	+272	+ 93	+303	+350	+194	+117	+ 39	- 78	- 39	+ 16	+ 78	+ 16	+ 70	+109	- 39	- 70	-117	- 93	+ 86
11		-117	- 47	-117	- 86	-121	- 43	- 97	+ 93	+113	+117	+156	+148	-140	- 78	+156	+175	+194	+210	+ 19	- 58	-132	- 70	- 39	+ 39	+ 8
12		-109	-163	- 93	- 39	-545	+175	- 47	+272	+467	+175	+198	0 - 86	- 39	-109	- 78	+109	+311	+510	+202	+910	+117	- 35	- 39	+ 86	
13		+327	+ 78	- 54	-241	-237	+342	- 82	-210	+230	+782	+537	+140	+117	+556	-560	-253	-117	+202	+218	+187	+327	-564	+ 54	+ 82	
14		-156	-241	-109	-226	-117	+ 31	+ 62	+261	+545	+210	+ 62	+ 39	+ 54	+ 23	- 47	+272	-315	-109	+109	0 - 97	-117	0 - 16	+ 5		
15	X	-156	-268	- 54	-109	-148	- 39	- 78	+148	+358	+ 51	+109	+ 39	+ 43	-121	- 78	- 39	-117	- 43	- 93	- 39	+ 39	- 39	- 43	- 27	
16		- 78	-136	0 - 70	- 39	- 78	- 47	+ 78	+ 78	+117	+222	+ 39	-113	- 43	-121	-109	-113	-117	-436	-471	-237	-280	-222	-159	- 97	
17		-121	-117	-237	-191	-268	-159	-171	-179	-191	- 19	+ 39	0 - 23	- 23	- 27	0 + 16	+ 16	- 47	- 43	- 43	+ 39	+214	+ 47	+ 62	- 60	
18	X	+ 39	- 19	+206	+175	+194	+198	+233	+171	+206	+280	+237	+ 78	+ 43	- 82	-156	-121	- 19	+ 62	+ 39	+ 47	+101	+ 39	+ 70	+ 43	+ 86
19		+ 8	- 16	+ 19	+ 23	+ 74	- 39	+136	+311	+ 39	+490	+591	+ 78	- 82	-124	- 78	- 39	+132	+272	+ 39	+132	+ 58	+117	+288	- 19	+100
20	X	+ 39	+ 35	+101	- 43	- 82	- 39	- 19	+159	+237	+303	+ 70	-136	+ 51	+ 23	+ 78	-124	-152	- 62	- 35	+121	+ 74	+ 82	+ 35	+105	+ 34
21	X	0	+109	- 74	- 82	+ 43	- 66	+159	+109	+148	+194	+ 54	-187	-214	- 78	- 62	- 43	- 35	- 39	- 39	+ 31	+ 16	0 + 47	+ 19	- 2	
22		- 12	- 47	- 31	- 39	0 + 12	+ 12	+ 16	- 82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		-121	-191	- 70	-218	-210	-226	-202	- 47	-113	- 62	- 47	+109	+113	+ 47	+307	+136	..
24		+ 89	+117	+ 97	+152	+156	+109	+140	+187	+156	+ 78	+117	-167	- 70	-124	0 +318	+ 51	+287	+567	+229	+312	+484	+471	+261	+167	
25		-121	-127	+127	+ 51	- 51	-134	+ 76	-127	+ 57	+286	+178	+191	+822	+956	+573	-153	+172	+382	-217	+210	-318	+433	- 51	+136	
26		+197	-191	-395	+535	+ 64	+ 76	+140	+255	+127	+204	+261	+280	+248	+127	- 96	-197	-102	+ 64	+115	+127	+268	+217	- 64	+ 51	+ 96
27		- 25	- 70	+ 13	+127	- 76	+248	+191	+287	+248	+318	+395	+318	-134	+ 57	-115	- 57	0 + 57	+ 64	+140	+229	+312	- 96	+140	+107	
28	X	+ 76	+115	+140	+ 32	+153	+261	+331	+ 89	+293	+312	+312	+261	+ 25	- 38	- 70	- 51	- 76	+115	+204	+318	+325	+318	+223	+153	+159
29		+312	+217	-185	+255	+268	+223	+140	+248	+134	+255	+217	+287	+350	+204	+127	-287	-159	+115	+204	+191	+223	+115	+ 57	+191	+154
30		+261	+255	+178	+140	+ 70	+242	+166	+178	+185	+223	+261	+318	+191	+217	+ 51	+153	+ 32	+ 89	+191	+248	+127	+166	+376	-134	+174
MEANS ALL DAYS		+ 18	- 9	- 36	+ 31	- 10	+ 85	+104	+162	+217	+210	+155	+ 55	+ 5	+ 38	+ 1	+ 7	- 11	+ 45	+ 61	+ 46	+112	+ 88	+ 47	+ 38	+ 57
MEANS 10 DAYS		- 10	+ 17	+ 6	+ 45	+ 83	+123	+170	+165	+262	+211	+ 94	+ 16	- 9	- 60	- 28	- 33	- 52	+ 6	- 17	+ 32	+ 63	+ 60	+ 22	+ 29	+ 50

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TABLE 245

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTH-EAST										LENGTH IN KMS										DIRECTION N 17° 8' E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		-183	-63	+57	-145	+63	+126	+126	+32	+139	+69	+164	-63	-139	-221	-177	-32	0	+76	+101	+177	+120	+158	+114	+164	+28					
2		0	0	0	-88	+25	+95	+38	+63	+76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	X	-76	-246	-120	-76	-63	-95	0	+189	+183	+202	+183	-63	-259	-246	-189	-189	-133	0	0	+63	+69	0	+57	+76	-31					
5		-19	-63	-50	-88	+158	0	+189	+252	+240	-208	+63	+63	-88	+69	-63	-133	+126	+126	+126	+151	+13	+63	0	-107	+34					
6		-126	+63	+101	-76	+69	-107	-95	0	+177	+158	+69	-101	-189	+713	+158	+391	+133	+303	+707	+641	+707	-221	-410	-480	+149					
7		-707	-360	+158	+536	-189	-278	-120	0	-303	+259	+379	+278	0	+435	+278	+252	-252	-88	+133	+454	-120	+669	+259	-32	+68					
8		-385	-568	+63	-139	-259	+189	+32	+32	+353	-133	0	+95	+246	+88	+189	+227	+246	+429	-38	+145	+177	+133	-133	-69	+38					
9		-517	0	+189	+151	-555	+120	-347	+372	+202	+303	+95	+189	+38	+246	+76	+151	+133	+189	+189	+246	+202	+69	0	-13	+72					
10		+126	-63	+69	-32	+120	+126	-120	+353	+126	0	0	+88	0	+133	+398	+88	+63	+196	+189	+221	+63	+183	+25	-57	+96					
11		-126	-259	+57	+227	-196	+177	+57	+252	+114	+196	+189	0	-114	-139	-126	-120	-32	+126	+189	+341	-114	0	-69	-69	+23					
12		-63	-133	-57	+69	0	+88	+126	+164	-63	+189	+120	-196	-246	-126	+25	+88	0	+196	+126	+246	+183	+309	-133	-76	+36					
13	X	-215	-69	-189	+114	+63	+120	+177	+69	+265	+88	+95	-38	-183	-309	-316	-189	+69	+126	+233	-13	+57	+50	0	0	0					
14		-120	-69	-183	+19	0	0	0	+88	+265	+177	0	-189	-284	-246	-246	-82	+88	+240	+189	+126	+283	+240	+120	0	+15					
15		-120	-183	-170	-69	0	+32	+88	+252	+69	-183	-63	-82	-76	+50	+32	+133	0	+177	+63	+133	+114	0	-69	-57	+3					
16		-120	-120	0	+13	-82	-19	-32	+63	+126	+442	-63	0	-57	+63	+227	+391	+101	+385	+50	+196	+177	+57	+63	0	+76					
17	X	+76	-221	+120	-69	+63	+57	+95	+114	+76	+120	+240	+63	-133	-63	-158	+69	+95	+107	+196	+246	-44	+63	+133	+101	+56					
18	X	+133	+50	+120	+95	+126	+183	+215	+126	+189	+177	+120	-126	-246	-221	-50	-63	-63	+120	+114	+133	+120	+177	-44	-50	+56					
19	X	-57	-76	-63	-50	-63	-38	+114	+240	+284	+196	+50	-139	-189	-189	-63	-32	-114	+114	+133	+120	+76	+63	+63	+50	+17					
20		0	0	0	0	+50	-57	+69	+133	+126	+76	+139	+76	+126	-69	-76	-114	+32	+246	+259	+322	+133	+316	+133	+316	+93					
21		+410	+196	-126	+88	+177	+63	-69	-309	-322	+126	+284	+284	+101	+360	-32	-101	+63	+574	-44	+88	+309	+114	-429	+196	+83					
22		+133	+145	-202	-278	-13	+126	-707	0	+341	-32	+126	+120	+303	+581	+309	-69	-133	+76	+196	+189	+189	+13	+76	-38	+60					
23		-63	-303	-114	-44	+328	+189	+126	-57	-63	+101	+69	-114	-95	+57	-50	+63	+114	+233	+82	+126	+133	-88	-107	-284	+10					
24		+133	-95	-303	+82	+133	+26	+101	-189	-50	+126	+151	-177	-126	+133	-13	-139	+69	+221	+303	+252	-76	-76	-63	+114	+27					
25	X	+177	+202	+63	-50	-57	-114	-32	-126	+158	+88	+114	-177	-202	0	+82	-76	+101	+126	+189	+151	+139	+189	+82	-208	+34					
26	X	-252	-164	-76	-57	+63	+63	+63	-95	+76	+265	+183	-133	-309	-246	-246	-114	-107	-63	+133	+63	-76	-189	+177	-32	-45					
27		-50	-164	+63	+133	-32	+88	-63	+63	-145	+63	+139	-69	-151	-259	-57	-76	+69	+69	+69	+133	+63	-32	+63	+95	0					
28	X	-126	-164	+133	+69	+189	+63	-76	-69	+114	+183	+120	-101	-442	-151	-120	-177	+114	+196	+82	+133	+63	-95	+57	-139	-6					
29		0	-76	-50	-133	+76	+76	-88	+240	+158	+120	0	-303	-379	-196	-215	-189	+32	+252	+95	+51	+88	+57	+63	-32	-14					
30	X	-25	-88	0	-101	-57	+126	+246	+120	+246	+309	+126	-145	-290	-316	-328	-322	+32	+95	+63	+13	0	+69	-69	0	-12					
31	X	-38	+32	+120	-95	-63	+63	+126	+126	+309	+196	+63	-309	-322	-303	-246	-196	-63	+76	+32	+322	+139	+25	+88	0	+3					
MEANS ALL DAYS		-76	-99	-13	+3	+2	+51	+7	+84	+117	+127	+109	-44	-128	-12	-34	-19	+27	+170	+143	+223	+108	+80	+2	-22	+34					
MEANS 10 DAYS		-40	-74	+11	-22	+20	+43	+93	+69	+190	+182	+129	-117	-258	-204	-163	-129	-7	+90	+118	+123	+54	+35	+54	-20	+7					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1939

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1939

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE										LENGTH IN KMS										DIRECTION										E 0°.5 N	
		EASTWARD					LINE					LENGTH IN KMS					DIRECTION					E 0°.5 N																					
1		- 57	+178	+261	+ 51	+197	+318	+191	+ 89	+185	+204	+331	+159	+293	+ 76	- 57	- 57	+ 70	+ 64	0	+134	+185	+134	+127	+261	+139																	
2		+115	+248	+ 96	+127	+178	+248	+134	+ 89	+191	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
3		+ 89	+217	+268	+312	+318	+115	- 64	+ 70	+127	- 64	+331	+248	+134	+121	+159	+153	+ 57	..																	
4	X	+115	- 89	+ 13	+ 70	+102	+ 64	+185	+127	+185	+248	+331	+204	+ 64	- 70	- 51	-204	-121	- 64	0	+ 70	+127	+ 70	+127	+178	+ 70																	
5		+115	+ 64	+ 64	0	+204	+248	+185	+252	+204	+ 96	+440	+331	+382	+197	- 51	+ 96	+255	- 96	+115	+ 64	- 32	+ 51	+ 19	- 51	+131																	
6		+ 57	+ 64	+127	- 51	+127	- 57	+ 38	+ 38	+178	+197	+191	+255	+102	+414	+541	+306	-204	- 96	+911	+1236	+510	-166	-287	-376	+211																	
7		-535	-408	- 96	+299	+191	-197	-134	+350	-433	+287	+446	+599	+134	+497	+255	+382	-420	-261	+159	+580	-331	+764	+ 96	+134	+ 98																	
8		-140	-522	-127	-115	-382	+389	- 57	-102	+803	+ 64	+ 38	+147	+452	+ 70	- 70	0	+102	+ 96	- 57	+127	+ 51	+159	- 51	- 51	+ 34																	
9		-312	-115	+127	+197	-382	+223	- 96	+242	+204	+408	+414	+420	- 32	+ 96	- 64	-127	- 51	0	+ 64	+197	+178	+ 38	- 32	+ 64	+ 59																	
10		+147	- 25	+ 19	-121	+102	+293	0	+331	+127	+ 51	+ 70	+ 76	+134	+306	+344	- 64	- 51	+ 70	+127	+121	+ 57	+312	+ 70	+ 70	+107																	
11		- 51	-197	+127	+223	+153	+102	+255	+293	+ 96	+261	+325	+185	+153	+134	+ 57	- 64	-134	+ 96	+197	+147	+102	+ 70	+ 70	+ 76	+112																	
12		+ 64	-108	0	+ 70	+ 70	+127	+242	+134	+287	+248	+605	+153	+ 57	+ 32	+121	+223	-121	+ 70	+ 64	+248	+229	+261	0	+ 70	+131																	
13	X	-159	- 57	- 51	+140	0	+ 32	+140	+147	+ 64	+ 96	+318	+312	+197	- 76	-242	-248	- 51	- 25	+166	+ 51	+ 89	+127	+ 76	- 25	+ 43																	
14		+ 51	+121	- 70	+ 64	+ 57	- 45	- 32	- 57	+191	+236	+261	+153	+ 38	- 57	-127	- 96	+ 64	+248	+191	+127	+325	+ 51	+217	+ 83	+ 83																	
15		- 13	- 64	-102	- 51	0	+ 70	+ 70	+127	+121	- 64	+ 64	+248	+178	+121	+ 76	+127	-127	+ 89	+ 64	+127	+134	+ 25	+102	+ 64	+ 58																	
16		- 13	- 70	+ 51	0	- 51	- 70	- 83	- 25	0	+376	+255	0	+ 64	+140	+312	+599	- 51	+280	-183	+ 57	+102	+ 64	+166	+ 45	+ 82																	
17	X	+140	-183	+ 57	+ 32	+ 32	+ 13	+ 51	+ 45	+ 64	+ 89	+261	+223	+121	+ 64	-115	0	- 25	0	+115	+197	-127	0	+ 64	+ 64	+ 49																	
18	X	+140	0	+ 76	+ 13	+ 70	+121	+ 96	+ 70	+134	+121	+140	+ 64	- 57	- 76	- 25	- 51	- 70	0	+ 57	+108	+102	+183	0	- 57	+ 48																	
19	X	- 6	- 57	+ 6	- 6	- 45	- 19	+108	+ 64	+ 96	+153	+197	+147	+ 64	- 70	- 64	-102	-134	- 64	+ 13	+ 76	+ 64	+ 64	+ 64	+ 51	+ 25																	
20		0	+ 25	+ 13	- 25	0	-134	+ 51	+ 57	+ 32	+ 64	+197	+191	+121	-134	- 57	-127	-134	+ 64	+153	+318	+178	+287	+344	+637	+ 88																	
21		+178	+ 64	+147	-478	+242	+ 57	+178	-229	-197	+115	+242	+503	+242	+554	- 64	- 89	+217	+522	-261	+115	+376	+159	-306	+197	+104																	
22		+ 64	+115	- 76	-363	- 64	+ 51	-159	- 57	+452	0	+ 83	+204	+252	+ 32	+134	-108	-115	- 57	0	+ 64	+ 64	- 32	-121	- 51	+ 13																	
23		- 70	-178	-121	- 64	- 70	- 57	- 64	- 57	- 70	+ 38	+102	0	+ 32	0	- 32	+357	+293	+376	+178	+318	+395	+166	+ 70	0	+ 64																	
24		+178	- 32	-121	+ 76	+191	+306	+261	- 96	0	+204	+331	+191	+248	+389	+ 64	- 70	+ 38	+210	+350	+369	+ 70	+127	+197	+204	+154																	
25	X	+318	+433	+255	+191	+191	+134	+183	-140	+ 64	+102	+369	+287	+ 64	+204	+242	- 13	+178	+ 83	+204	+248	+261	+318	+134	+ 89	+183																	
26	X	- 70	- 51	- 32	+ 57	+ 64	+178	+ 51	- 51	+ 64	+261	+331	+248	+ 57	- 64	-191	-166	-134	-147	+ 96	+159	0	- 70	+452	+153	+ 50																	
27		+134	- 70	+191	+293	+178	+217	+102	+ 51	- 70	+121	+414	+293	+312	- 96	- 25	- 64	+ 89	+134	+115	+191	+185	+121	+191	+261	+136																	
28	X	- 38	- 64	+153	- 13	+223	+210	+ 64	-134	+ 64	+312	+389	+312	-197	- 57	- 70	- 70	+268	+197	+166	+147	0	+ 32	+166	0	+ 86																	
29		+ 57	0	0	- 25	+ 64	+166	+ 13	+115	+288	+325	+261	+191	- 57	- 96	-312	-191	- 13	+248	+ 38	- 38	+ 76	+ 70	+223	0	+ 58																	
30	X	+ 13	- 51	+ 51	0	+ 64	+ 76	+191	0	+185	+471	+478	+153	0	- 96	-306	-331	- 64	+ 64	+134	+ 57	+ 96	+ 76	0	+115	+ 57																	
31	X	+ 64	+ 57	+191	+ 64	+ 13	+115	+153	+185	+306	+344	+369	+102	0	-127	-197	-217	-127	+ 57	+ 76	+440	+140	+ 64	+127	+ 64	+ 94																	
MEANS ALL DAYS		+ 13	- 42	+ 39	+ 18	+ 53	+101	+ 75	+ 61	+124	+187	+285	+219	+118	+114	+ 1	- 13	- 20	+ 74	+112	+209	+124	+122	+ 79	+ 78	+ 89																	
MEANS 10 DAYS		+ 52	- 6	+ 72	+ 55	+ 71	+ 92	+122	+ 31	+123	+220	+318	+205	+ 31	- 37	-102	-140	- 28	+ 10	+103	+155	+ 75	+ 86	+121	+ 63	+ 71																	

* = 10 LEAST DISTURBED DAYS

TABLE 247

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME.)

		COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8 E																																		
		NORTHERLY					LINE					OM					58.4					17-18					19-20					20-21					21-22					22-23					23-24					MEAN				
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																															
1		- 64	- 95	- 83	0	- 64	+ 64	0	+381	+311	+254	- 51	-349	-318	- 95	-514	-184	+457	+241	+406	+457	+ 32	0	+ 89	+260	+ 47																														
2		+190	+229	-133	-152	-184	-133	-127	+241	+260	+286	+ 51	-114	-133	-368	-114	- 51	+ 57	- 13	+ 64	+210	+368	+190	+254	+260	+ 47																														
3		+438	+216	+114	-152	-318	-248	-260	-318	+946	+483	+105	+444	+476	+318	- 83	- 83	+190	+ 70	- 57	+ 70	+ 64	-152	-102	- 64	+129																														
4		- 32	-152	- 64	-216	-190	- 70	-190	+127	+165	+508	+114	+ 89	+391	-152	-2-1	-305	- 64	- 64	+121	+108	+724	-286	-406	-178	- 11																														
5		-127	- 70	-121	-127	-133	- 70	- 95	-102	+122	+ 52	-116	+221	+116	+279	- 87	+232	+465	-203	..																														
6		+ 46	-168	- 64	-151	-110	-320	-227	+395	+558	+290	+110	+569	-221	- 58	-122	+134	-116	+174	+279	-145	+ 58	+ 87	- 70	+105	+ 43																														
7		- 17	0	- 70	+ 41	+ 58	- 58	-198	- 87	+128	+407	+143	+279	-116	-174	+244	-180	- 29	+116	+163	+198	+325	+ 58	-261	- 52	+ 38																														
8		- 12	- 70	- 46	- 58	0	- 29	0	- 52	+162	+174	+203	0	- 58	-116	-116	- 87	+122	- 64	0	+ 93	0	- 58	-116	-116	- 10																														
9		- 64	- 46	- 46	0	-180	+ 58	+ 70	+163	+325	+279	-163	+ 93	-168	-290	-128	- 35	+238	+279	+192	+105	+163	-221	- 64	- 23	+ 22																														
10		- 93	- 87	- 70	-151	- 70	+116	-122	+901	-279	+627	+767	+267	+180	-116	-145	- 52	- 58	+105	0	+ 70	+163	-378	+ 46	+ 87	+ 71																														
11		+ 93	-145	- 29	-192	+ 70	- 23	- 35	+139	+349	+256	- 58	-436	-174	+145	+ 29	- 93	- 64	+581	+232	+413	- 29	-209	+ 93	-639	+ 11																														
12		-122	+ 93	- 81	+116	-238	- 46	-105	+285	+145	+ 58	0	-110	-273	- 58	+ 87	-285	- 29	- 23	+128	+122	+180	-221	- 12	- 52	- 18																														
13	X	- 12	-227	-139	+ 58	- 46	0	+ 46	+238	+372	+372	+ 29	-337	-418	-349	-296	- 93	+163	+ 58	+ 87	+ 64	+ 58	0	- 46	- 64	- 20																														
14	X	- 64	- 58	- 12	-163	+163	+ 70	+ 76	+244	+465	+354	+ 70	-221	-349	-418	-285	-232	+ 46	+232	+180	+163	+ 58	-110	+ 29	- 23	+ 9																														
15	X	0	- 87	+ 52	0	0	+ 70	0	+ 93	+238	+203	- 29	-325	-360	-343	-389	- 35	+ 87	+ 46	+110	+ 64	+ 52	+ 64	+ 58	+ 35	- 16																														
16		+227	-442	+122	+ 81	- 29	+116	-105	+116	+453	+349	+366	- 64	-378	-407	-290	+ 64	+128	+145	+145	+430	-168	-174	+221	0	+ 38																														
17		- 12	-256	-105	-110	- 64	- 64	-145	+ 70	+755	+517	-105	+ 58	+221	-116	-244	- 35	+407	-151	- 87	+ 58	+ 58	- 52	+163	- 12	+ 31																														
18		-180	-337	- 12	-116	-105	- 46	- 58	+413	+825	+779	+639	-651	-285	+343	+221	+232	+ 46	- 46	+ 70	+ 87	-122	- 58	- 35	- 29	+ 66																														
19		- 52	- 70	-110	-261	- 52	- 87	+134	+ 58	+203	+ 58	- 58	-168	-279	-105	- 58	+116	+122	0	0	0	+ 46	+ 70	-128	- 64	- 29																														
20	X	+ 58	-122	+ 29	- 58	+ 64	0	- 29	+337	+ 93	+320	- 58	-285	-163	-180	- 64	+174	+163	0	- 12	- 58	+ 52	- 64	- 46	- 64	+ 4																														
21	X	- 58	- 12	- 93	- 58	- 58	+ 58	0	+180	+349	+413	0	-465	-465	-221	+ 58	+ 93	+105	+180	+122	+ 87	+70	+174	0	- 52	+ 17																														
22	X	- 52	- 29	-110	+ 46	- 12	+ 70	+ 46	+110	+198	+337	+ 70	-389	-174	-110	-128	+ 46	+ 70	+ 52	+110	0	+ 17	+ 29	+ 29	- 23	+ 7																														
23	X	+ 81	- 52	- 35	-407	0	- 58	-116	+145	+145	+203	+122	-145	-238	-221	-122	+163	+ 46	+203	+145	+180	+ 58	+ 70	+ 29	+ 58	+ 11																														
24		- 52	-168	- 17	+ 81	- 58	+ 58	+238	- 64	- 35	-279	- 64	- 70	- 93	-180	+ 52	+221	+193	+105	+238	+343	+ 93	+174	-186	+221	+ 32																														
25		-279	-186	+261	- 64	- 64	-128	-413	- 23	+430	+320	+151	- 99	-261	-488	- 70	-110	- 29	+ 58	+ 46	+ 58	0	0	- 58	- 87	- 43																														
26	X	- 58	- 52	- 81	- 70	- 58	+ 17	0	+122	+186	+ 35	-192	-407	-302	-116	- 64	+105	+116	+227	+122	+145	+ 58	+122	+ 87	+ 12	- 2																														
27	X	-238	- 58	0	0	0	0	+105	+238	+186	+105	0	-261	-349	-180	0	+ 70	0	+ 46	+ 12	+110	+ 64	+ 70	0	- 64	- 6																														
28	X	- 12	0	- 46	0	+ 23	+ 52	+ 58	- 58	- 64	- 58	- 58	-186	-186	- 70	+ 58	+116	+116	+116	+186	+186	+145	+ 52	+ 58	+ 29	+ 19																														
29		+ 70	+ 46	+139	+186	+174	+ 58	+ 64	+110	0	-122	-459	-407	-290	- 23	+192	+ 58	+163	+186	+256	+244	0	- 64	+ 46	+ 29	+ 29																														
30		+145	0	-232	+203	- 58	+122	- 58	-145	- 93	+105	- 81	-372	-232	- 58	+139	+203	+174	+232	+139	+192	0	+192	+413	-349	+ 24																														
31		-145	- 93	- 93	- 87	+110	+174	-151	+581	+314	+192	+163	- 29	-110	+ 81	-459	+ 81	+651	+302	-145	+ 58	+163	- 81	+168	-633	+ 42																														
MEANS ALL DAYS		- 9	- 81	- 35	- 55	- 43	- 7	- 50	+165	+270	+261	+ 91	-136	-171	-136	- 95	+ 1	+116	+113	+108	+137	+ 91	- 26	+ 8	- 50	+ 19																														
MEANS 10 DAYS		- 36	- 70	- 44	- 65	+ 8	+ 28	+ 19	+165	+217	+228	- 5	-302	-300	-221	-123	+ 41	+ 91	+116	+106	+ 94	+ 60	+ 41	+ 20	- 16	+ 2																														
																																	* = 10 LEAST DISTURBED DAYS																							

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD LINE OF LENGTH IN KMS 93.9 DIRECTION E 0° 5 N

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+122	-58	-77	+103	-64	+128	-13	+327	+385	+455	+314	+26	-58	+90	-423	-179	+468	+372	+487	+442	+26	+77	-58	+506	+142
2		+308	+244	-58	-51	-64	-199	-199	+359	+308	+506	+436	+288	+186	-135	-71	+64	+26	-32	+90	+237	+442	+314	+256	+308	+148
3		+397	+192	+103	-244	-192	-263	-96	-147	-167	-192	+776	+641	+776	+455	-58	-250	+128	+64	+58	+103	+115	-58	+64	-51	+90
4		+77	-90	+64	-51	-115	-90	-64	+71	+64	-77	+295	+391	+833	+192	-244	-282	-83	-160	+160	+250	+686	-327	-224	-71	+50
5		-13	-13	-71	-71	-115	-51	-77	-135	-115	-26	+165	+285	+390	+494	+307	+198	+77	+274	-27	+165	0	+253	+384	+27	+96
6		0	-170	-132	-198	-137	-99	-247	+88	+285	+280	+115	+725	-82	-82	0	0	-176	+165	0	-137	+55	+55	-27	+154	+18
7		0	-55	-44	+22	+115	+110	-27	+384	-170	+121	+198	+571	+71	+22	+576	-296	-99	+60	+110	0	+242	+384	-154	-44	+87
8		+99	+11	+132	+132	+165	+170	+242	+247	+165	+247	+351	+318	+115	+55	+115	+115	+77	-110	-22	+165	+154	+104	+66	+60	+132
9		+110	+165	+170	+170	+77	+199	+192	+154	+445	+576	+110	+609	+165	-99	-187	-115	+187	+274	+192	+165	+55	-33	+60	+209	+156
10		+115	+170	+165	-44	+49	+379	+659	+824	0	+818	1010	+719	+362	+77	-165	0	-110	-49	-60	+55	+225	-357	+412	+170	+226
11		+154	+55	+88	-66	+115	+115	+55	+280	+274	+445	+176	+285	+329	+264	+11	+187	-22	+500	+302	+351	-82	-192	+165	-291	+146
12		0	+110	+44	+214	-60	+220	+55	+329	+631	+192	+467	+329	+66	+154	+220	-379	-115	+60	+165	+192	+60	-11	+99	+88	+130
13	X	+110	-33	-82	+49	+55	+55	+110	+165	+357	+489	+379	+214	-154	-269	-324	-220	+60	+110	+82	+99	+82	+110	+60	+66	+65
14	X	0	+22	+27	-49	+44	+104	+77	+176	+340	+489	+428	+209	-55	-258	-302	-302	-22	+269	+274	+49	-132	-115	+55	+55	+58
15	X	+55	-27	+44	0	+11	-22	0	+44	+55	+280	+351	+115	-71	-176	-384	-60	0	+110	+132	+82	+104	+143	+192	+143	+47
16		+115	-247	+49	+115	-55	+55	+82	-143	+269	+522	+703	+379	-126	-329	-247	+33	+60	+137	+60	+445	-159	-115	+335	-60	+78
17		+82	-165	-55	-44	-49	-60	+137	-264	+549	+576	+417	+296	+335	+11	-220	+99	+296	-247	-137	+66	-71	+55	+247	+115	+82
18		-77	-269	-66	-214	-115	-143	+77	+505	+1361	+1125	+961	-77	-659	+165	+220	+115	-77	-115	-55	+77	-44	+44	+49	+66	+119
19		-22	-11	-44	-137	-33	-77	-44	-44	+27	+77	+154	+77	-88	+44	+60	+115	+110	+60	+22	+33	+88	-60	-55	0	+10
20	X	+60	-66	0	-55	+66	0	-22	+165	-60	+236	-274	+137	0	-154	-126	+82	+143	+60	0	+55	+110	+33	+44	+22	+19
21	X	-11	+22	+27	0	+44	+44	+55	+55	+242	+340	+214	-170	-165	-137	+27	0	0	+71	+99	+110	+176	+274	+247	+159	+72
22	X	+159	+209	+99	+291	+291	+285	+280	+280	+346	+560	+489	0	+176	-55	-110	+60	+137	+187	+187	+66	+115	+77	+154	+66	+181
23	X	+269	+55	+77	-253	+99	+154	-82	+165	+110	+254	+379	+170	+115	+82	0	+137	+55	+274	+170	+264	+280	-16	0	+99	+119
24		+60	-49	-49	+225	+99	+220	+335	+159	+335	+66	+269	+373	+406	+390	0	+60	+176	+264	+285	+439	+384	+159	-93	+264	+199
25		-60	-132	+220	+110	+11	-77	-209	+110	+329	+428	+264	+192	-55	-231	-22	-165	-66	+88	+104	+110	+99	+66	+99	+44	+52
26	X	+55	+110	+60	+55	+55	+88	+55	+33	+104	+27	+11	+55	-88	+44	-27	+77	+60	+220	+77	+181	+137	+247	+170	+247	+86
27	X	-165	-27	0	+60	-27	+55	+55	+55	+209	+115	+176	+66	-82	-55	+44	+27	-27	-44	0	+110	+104	+110	+44	+44	+35
28	X	+55	+55	-44	-22	-22	-5	-16	-44	-49	+60	+154	+44	-115	0	+66	+143	+115	+110	+274	+176	+176	+110	+121	+99	+60
29		+115	+60	+110	+154	+99	+27	-66	-44	-55	+154	-60	-66	-60	+137	+231	+154	+165	+318	+340	+264	-33	+82	+99	+66	+91
30		+132	-27	-307	+296	-60	+110	-38	-192	+44	+247	-33	-22	-121	+121	+22	+110	+225	+220	+143	+214	+55	+280	+434	-373	+62
31		+137	+165	-307	-88	+60	+126	-318	+395	+82	+741	+264	+461	+428	+159	-445	+60	+884	+373	-165	-44	-132	+231	+505	-236	+152
MEANS ALL DAYS		+79	+7	+15	+13	+11	+47	+31	+141	+216	+327	+312	+246	+89	+31	-47	-13	+85	+125	+108	+154	+107	+62	+121	+63	+97
MEANS 10 DAYS		+59	+32	+21	+8	+62	+76	+51	+109	+165	+286	+231	+84	-44	-98	-114	6	+56	+137	+130	+119	+115	+97	+109	+100	+74

* = 10 LEAST DISTURBED DAYS

TABLE 249

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										DIRECTION N 17° 8 E										MEAN				
		NORTHERLY										S8.4														
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		+222	-637	+123	+88	-444	+216	+315	+304	+280	+748	-164	+88	-292	-153	+280	-53	-625	+140	+82	0	-47	-47	+47	+47	+33
2		-555	+76	+280	+47	-58	-29	-280	+204	+23	+234	+380	+415	-350	-169	-152	-64	+64	+47	+82	+47	+53	+47	+58	+58	+19
3		+53	-239	+169	+228	-47	-210	-234	-315	+222	+596	+841	-123	-187	-222	+175	+234	+58	+123	+58	-23	-35	0	-64	-105	+40
4	X	-47	-53	0	0	+47	-134	0	0	+409	+315	-164	-64	-187	-58	-158	-53	+110	+70	+88	0	+47	+58	-12	-105	+5
5	X	-64	-47	+105	-123	-123	-58	-29	-263	-58	+222	0	-53	-175	-64	0	+123	+280	+117	+222	+204	+47	0	-64	-18	+8
6		+117	+58	-117	-210	-234	-117	+140	+204	+204	+58	+263	-374	-181	+117	-53	+123	+304	+181	+520	-339	0	+53	0	-128	+25
7		-105	-53	-64	-53	-88	+64	+152	-181	-175	-53	-117	-105	-58	0	-64	0	+140	+304	-35	+64	+117	+222	+47	-2	
8		-64	-239	-47	-269	+82	+58	+58	+164	+58	+92	+12	-117	-88	-23	-169	-64	+298	+380	+117	+128	+415	+146	-239	+29	+30
9	X	-128	-175	-76	-128	-82	-29	+58	+53	+35	-29	-58	-164	-245	-222	-47	+12	+169	+35	+123	+76	+70	+12	+58	0	-28
10	X	-70	-53	-53	-99	-58	-29	+58	+222	+193	+58	-187	-263	-298	-297	-47	+204	+76	+117	+82	+82	-53	0	-35	-25	
11		-64	0	+169	-199	+239	+111	-25	+181	+29	-47	-58	0	-70	-134	0	+93	-234	+82	+362	-47	+200	+93	+339	-286	+34
12		-58	-164	-93	-146	-292	+58	-29	-82	+199	0	-117	-47	-64	-70	-70	-70	+70	+228	+204	+117	+58	0	+82	0	-12
13		-187	-47	-64	-111	+53	-64	-292	+199	+175	-123	-175	-64	-12	+111	+117	-93	+228	-58	+70	+18	+140	-88	+82	0	-8
14	X	-53	+105	-23	-199	+123	+58	+58	+105	+64	-58	-70	-128	-222	-123	-12	+222	+117	+58	+169	-58	0	+58	-35	-29	+5
15		+47	-93	-199	+374	+164	-181	-47	+123	+123	+70	+58	-146	-234	+88	0	+29	-29	+47	+117	+58	+123	+64	+23	-88	+20
16	X	0	-58	-117	-374	+204	+117	+58	+47	+123	-117	-47	-35	-47	-88	-35	+123	-70	-58	+47	+76	+88	+123	+58	0	+1
17	X	-70	-29	-47	-35	-286	+105	+88	+58	+175	+47	+12	+35	-82	-128	+29	+64	+58	-47	+58	+123	+58	+105	+23	+93	+17
18	X	+47	-29	-64	-82	-70	-58	-64	-70	-53	+58	0	-82	-70	+35	+117	+128	-58	-64	+12	0	+29	+29	0	0	-13
19		-53	-47	+35	0	-64	+47	+23	-47	-64	-47	+117	+93	-105	-123	-175	-53	+181	+117	+520	+672	+187	+82	-64	+23	+52
20		-105	-105	-146	-58	-47	+64	-58	-327	-128	-58	-187	-12	+93	+234	+228	+210	+175	+380	+58	+222	+409	+234	+23	+70	+49
21		-105	+58	-82	+415	+105	+187	-53	+47	-175	-304	+70	+105	+164	+105	+175	+64	+175	0	+53	+304	+175	+117	+280	+222	+88
22		-526	+537	0	-23	+111	-64	0	+70	-169	-105	-456	-362	-234	-117	+29	+199	+181	0	+105	-64	-47	+58	+123	-58	-34
23		+70	-29	0	+76	+234	+58	+111	-117	-47	-47	-117	-286	-187	-228	+222	+280	+385	+409	+82	+82	-64	+93	+41	+339	+57
24		+134	+117	+222	-47	-175	-309	+175	+175	-53	-286	-584	-345	-234	-70	+123	-467	+117	+175	-58	+415	+187	+380	+526	+356	+18
25		+82	+58	-648	+701	+123	-345	-432	-286	-58	+461	+479	+765	+164	+169	-53	-58	+29	+117	+58	0	0	0	0	-41	+53
26		-58	-12	58	+18	+64	-12	+164	+234	+234	+164	+82	-82	-175	-105	-292	-117	+47	+164	+152	+222	+280	+181	-234	-164	+34
27	X	-105	-64	-64	-123	-105	-111	-53	+280	+339	+181	-29	-181	-339	-345	-356	-117	+117	+128	0	+88	+175	0	0	+12	-28
28	X	-58	-29	0	-58	-53	0	+64	+23	+164	+111	-105	-298	-239	-245	+35	+164	+70	+128	+111	+111	+111	+164	+292	-93	+15
29		-222	-53	-70	-12	-58	-175	-88	+245	+409	+58	+222	+274	+111	0	0	-187	-123	+93	+123	+123	+47	+70	+485	-53	+51
MEANS		-66	-43	-28	-14	-25	-28	-6	+43	+86	+60	+28	-62	-119	-82	-18	+39	+95	+86	+137	+93	+98	+72	+67	+3	+17
ALL DAYS																										
MEANS		-55	-43	-34	-122	-40	-14	+24	+46	+139	+79	-65	-123	-190	-164	-47	+87	+87	+48	+91	+70	+57	+50	+32	-18	-4
10 DAYS																										

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+450	-69	+600	+488	+219	+819	+844	+600	+288	+238	+319	+250	+781	0	+212	+150	-69	0	+144	+175	+362	+194	+250	+319	+357
2		-219	+112	+550	+250	+75	+194	+12	+375	+25	+112	+569	+944	+150	+131	+62	+31	+69	0	+50	+69	+181	+125	+131	+119	+172
3		+188	-69	+188	+350	+175	+69	+175	-150	+375	+312	+944	-69	+188	+100	+369	+188	-200	+50	+75	+69	+125	+156	+75	+125	+159
4	X	+119	+125	+150	+125	+188	+112	+125	-69	+369	+550	-112	+194	+125	+319	-62	-31	+119	0	+56	+62	+100	+119	+31	0	+113
5	X	+62	+112	+188	+69	0	+69	+50	+256	-56	+62	+100	+256	+200	+194	+125	+138	+138	+62	+256	+306	+175	-12	-12	+94	+118
6		+69	+125	-69	-256	-319	-62	+281	+256	+188	+112	+506	+262	-69	+438	-56	+219	+125	+369	+200	-325	-56	+81	+12	-88	+81
7		-69	0	0	0	+12	0	+319	-112	-119	-56	+112	+100	+194	+131	-56	-69	-56	+250	+188	+150	+175	+244	+138	+206	+70
8		+69	-194	0	-225	+81	+50	+88	+50	+131	+62	+131	+188	+319	+500	-194	-119	+362	+494	+256	+194	-56	+262	-256	+6	+92
9	X	-88	-156	0	-94	-25	+62	+119	0	0	+156	+125	+112	-50	-75	-62	-50	+194	+75	+194	+119	+112	0	+69	+50	+33
10	X	-50	0	0	-62	-69	-12	+112	+212	+244	+250	+50	+194	+88	-119	-25	+219	-175	-50	-56	-25	0	+50	+75	+12	+36
11		-56	-31	+175	-375	+119	+162	+119	+112	+125	+112	+200	+362	+441	+281	+119	+112	-131	+156	+106	-194	+375	+75	+100	-156	+96
12		-12	-131	-81	-131	-319	-69	-56	-25	+194	+150	-50	+131	+194	+156	+25	-138	+75	+244	+300	+69	+62	+75	+75	+62	+33
13		-194	+25	-56	-100	0	-94	-306	+112	+31	-62	+50	+362	+338	+250	+100	-62	+119	-25	+88	0	+125	-38	+112	+69	+35
14	X	+31	+131	-25	-256	+250	+81	0	-62	-12	+62	+100	+50	-25	-50	-44	+162	+125	0	0	-50	0	+69	0	+38	+24
15		+69	-62	-156	+250	+194	-56	0	+62	-12	+156	+112	+50	+50	+238	0	-31	-62	+88	+100	+56	+175	+131	-69	-19	+53
16	X	+56	0	-56	-300	+194	+112	+62	-88	+150	+94	-50	+112	+219	+181	+112	+175	-62	-50	-31	+69	+112	+131	+119	+50	+55
17	X	-75	-25	-25	-25	-125	-50	+25	-75	0	+119	+100	+162	+81	+38	+112	+100	+62	-25	+25	+112	+125	+94	+50	+131	+38
18	X	+75	-56	-50	-75	-56	0	-62	-119	-38	+62	+31	+50	+62	+100	+175	+175	-12	-19	-69	-50	+50	+62	+50	0	+12
19		-12	-31	+56	-69	-75	+31	0	0	-56	-69	+181	+219	+69	+62	-125	-31	+325	+262	+838	+900	+312	+31	-181	-56	+108
20		+88	-219	-194	-119	-56	+112	-31	-256	-188	-131	-88	+56	+312	+338	+150	+200	+212	+500	+112	+194	+188	+256	-75	0	+57
21		-119	-88	-188	+338	-50	+275	+12	-375	-69	-175	-62	+188	+238	+131	+300	+50	+212	-56	+125	+431	+244	+62	+175	+112	+71
22		-594	+431	0	-50	-50	-56	-69	-25	+138	+281	+75	+219	+250	+369	+319	+438	+494	+362	+194	+144	+125	+250	+531	+31	+159
23		+300	+188	+150	+156	+244	+181	+256	+131	+188	+188	+150	0	+281	+175	+312	+250	+431	+319	+94	+62	-50	+244	+75	+356	+195
24		+250	+175	+350	+256	+262	+50	+325	+375	+244	+94	-194	-112	0	+31	+200	-50	+375	+425	+338	+306	+250	+388	+462	+531	+222
25		+56	+200	-581	+188	+175	+125	-69	-50	+175	+406	+425	+750	+250	+344	-50	-131	-62	+162	+175	+62	0	+38	+62	0	+110
26		0	+56	+112	+56	+88	0	+281	+244	+231	+312	+156	+219	+369	+31	-312	-200	-38	+75	+119	+281	+369	+150	-94	-112	+100
27	X	-56	+62	+112	+106	+181	+250	+319	+312	+325	+319	+250	+181	0	-88	-238	-131	+119	+250	+50	+156	+138	+69	+112	+62	+119
28	X	0	+106	+94	-25	+131	+244	+188	+188	+250	+200	+156	-125	-50	0	+256	+175	+56	+125	+175	+131	+125	+194	+294	+50	+122
29		-131	+69	+62	+75	+62	+125	+306	+75	+306	+162	+275	+444	+438	+338	+188	-75	-138	+62	+94	+138	+62	+131	+256	+281	+150
MEANS ALL DAYS		+7	+27	+45	+19	+52	+94	+118	+67	+118	+141	+192	+198	+188	+157	+66	+57	+90	+142	+145	+125	+135	+125	+89	+78	+103
MEANS 10 DAYS		+7	+30	+39	+54	+67	+87	+94	+56	+123	+187	+75	+119	+65	+50	+35	+93	+56	+37	+60	+83	+94	+78	+79	+49	+67

= 10 LEAST DISTURBED DAYS

TABLE 251

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN	
		NORTHERLY					LINE					CM					58.4					58.4					17° 8' E						
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1	X	- 58	-244	-105	0	-221	- 70	+ 93	+163	+232	+186	+163	0	-116	-238	-168	-122	- 70	- 29	- 64	0	0	+ 64	- 58	0	- 28							
2	X	- 52	- 52	-209	0	0	0	- 58	+ 46	+ 70	+ 81	0	-105	-122	-174	0	0	+ 64	+145	+122	+122	+ 35	+105	+145	-110	+ 2							
3		-105	0	- 58	- 23	+ 87	0	+ 76	+290	+163	- 70	-174	-337	-325	-186	+ 58	+ 58	+320	+105	+ 58	- 12	- 52	- 58	- 46	+ 46	+ 8							
4	X	0	+ 58	- 64	- 12	- 58	- 34	+ 64	+192	+290	+ 70	- 52	-174	-221	-250	-203	+ 64	+209	+139	+105	+ 64	+ 64	- 93	- 70	- 58	+ 1							
5	X	- 64	- 58	- 46	0	-174	0	+ 17	+221	+232	+139	- 64	-349	-407	-221	+ 35	+163	+ 87	0	+ 12	0	0	- 46	- 23	+ 58	- 20							
6	X	-105	- 58	- 76	0	0	0	+ 29	+261	+285	+163	- 46	-186	-418	-354	-186	+ 12	+ 58	+110	+ 29	+116	+122	+ 58	- 46	0	- 10							
7		+ 29	+ 58	+ 46	+ 64	+ 46	+116	- 58	+203	+227	0	-110	-180	-227	-180	0	+ 81	+105	+ 64	+122	0	+122	+105	+ 35	- 46	+ 22							
8		+232	+ 23	+180	+ 93	+ 70	-105	0	+296	+238	+ 23	-256	-343	-482	-134	+105	+186	+302	+395	+337	+697	+627	+401	+482	- 46	+138							
9		0	- 64	-168	-232	-238	0	+105	+256	+186	+ 58	-383	-320	-354	-296	-128	- 29	+198	+ 81	+116	+ 23	+ 64	+116	0	+139	- 36							
10	X	+ 64	+ 58	+ 35	+ 46	0	+ 29	+ 35	+110	+168	- 46	-221	-343	-354	-163	-116	+ 87	+232	+174	+ 52	+105	+ 52	+ 58	0	+ 58	+ 50							
11	X	0	- 52	- 17	+ 58	+ 58	+ 58	+163	+296	+105	-180	-343	-407	-290	-105	+ 46	+105	+174	+ 58	0	+105	+ 58	+ 46	0	- 35	- 4							
12		- 64	- 46	- 58	- 58	+ 46	+ 58	+203	+302	+261	+ 58	-174	+145	- 46	+174	- 29	+198	0	+122	+163	+279	-122	0	+151	+209	+ 74							
13		-325	+ 23	- 12	+ 58	-238	+ 46	+122	+279	+238	- 64	- 87	-163	-168	- 70	-256	+ 64	+105	+ 58	+ 64	- 23	+110	+186	-261	+581	+ 11							
14		+349	-261	-116	+ 87	0	- 58	+116	+290	+325	- 58	-203	-285	-116	-168	-168	-122	+ 46	+122	+ 46	+ 58	+ 29	+ 52	+ 58	0	+ 1							
15	X	0	0	- 29	- 23	0	+ 52	+151	+413	+279	- 70	-290	-302	-285	-174	- 70	- 46	- 46	- 70	+ 70	+ 46	+ 58	+ 81	+122	- 52	- 8							
16		+105	+ 93	+ 58	0	+ 58	+ 12	+180	+238	+122	-186	-302	- 29	-163	- 64	+ 58	+116	+105	+ 29	+ 64	+ 52	0	+ 52	+ 46	+ 64	+ 30							
17	X	+116	+ 64	+ 52	- 46	- 64	- 52	+163	+314	+227	- 58	-221	-244	-244	-308	-180	0	+163	+110	+ 58	+ 52	+ 46	- 58	0	- 58	- 7							
18	X	- 52	- 35	0	+ 12	+ 29	+ 81	+174	+378	+279	- 12	-221	-296	-296	-232	-186	-139	+ 58	+ 12	+ 58	+145	+163	+163	+168	+227	+ 20							
19		+186	+407	+215	-145	-122	-145	+314	+413	-145	-442	-430	-610	-232	+145	+354	+261	+517	+360	+122	+314	+674	- 87	-116	-116	+ 70							
20		-244	+238	-157	-256	+349	+151	+308	-517	- 52	-145	- 29	- 23	- 70	+174	-145	+ 81	+413	+261	- 64	+ 35	- 64	+349	- 64	- 87	+ 18							
21		-116	- 64	-116	+ 46	+ 87	+ 23	+227	+139	-110	-279	-255	+ 29	+163	+ 64	- 76	0	+105	+116	+349	- 23	-128	-116	- 93	-105	- 6							
22		-232	- 99	+ 81	- 23	+105	+ 87	+232	+413	+320	0	-401	-308	+ 64	+349	-145	+163	+ 46	+232	+168	+ 70	+ 58	+ 35	-157	- 81	+ 41							
23		+442	+813	+198	+ 70	+116	+337	+476	+697	+349	- 81	-296	-372	-372	+ 58	+720	+471	+779	+726	+267	+ 64	+203	- 6	- 64	+372	+249							
24		-238	- 29	+110	-302	+308	+285	+308	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	+314	+349	+ 41	-116	-453	-325	-523	- 97	-354	+639	+709	+1365	+145	- 93	-860	+ 87	+308	..							
26		-157	-349	-221	- 58	-116	+ 29	+139	+227	+395	- 35	- 87	-209	+180	-773	-442	-203	- 70	+744	+779	+ 87	+244	-174	-174	-360	- 25							
27		-337	- 35	-302	-116	+ 81	+145	+139	+343	+529	+418	-203	-314	-302	-221	+105	-279	+174	+302	+569	-325	+285	+ 46	-256	+ 52	+ 21							
28		-221	-163	- 46	-157	-320	+261	+163	+ 81	+744	+343	-145	-261	-308	-378	-198	+ 70	+ 58	0	+163	+ 58	0	+ 58	- 64	-122	- 16							
29		0	0	-331	+645	+418	-511	-174	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	+407	+872	-151	-465	+639	- 64	-227	+186	-285	-209	+755	+372	-761	-174	-290	-964	0	..							
31		-122	+163	-529	..	..	..	..	..	..	..	-279	-529	-442	+232	-267	+238	+749	+442	+128	+163	+482	-546	+296	-988	..							
MEANS ALL DAYS		- 23	+ 10	- 40	- 24	- 16	+ 39	+137	+244	+229	- 7	-186	-230	-212	-143	- 47	+ 48	+159	+168	+145	+ 81	+102	+ 51	- 11	+ 20	+ 21							
MEANS 10 DAYS		- 15	- 32	- 46	+ 4	- 43	+ 6	+ 83	+239	+217	+ 27	-130	-241	-275	-222	-103	+ 12	+ 93	+ 65	+ 44	+ 76	+ 60	+ 38	+ 24	+ 3	- 5							

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1940

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

MARCH 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS 93.9										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1	X	+ 68	-135	- 31	0	- 62	+123	+123	+ 74	+172	+258	+252	+ 62	+111	+ 49	0	-111	-123	0	0	+ 62	+123	+123	+111	+ 49	+111	+ 54															
2	X	+ 49	+ 55	-123	+ 86	- 31	0	- 37	- 12	- 25	+129	+ 96	+ 69	+184	+135	+123	- 12	+ 74	+135	+172	+129	+123	+135	0	+ 49	+ 82																
3		- 49	+ 31	- 98	0	+111	+ 86	+ 49	+234	+197	+ 31	- 49	- 62	+ 49	+ 68	+295	- 55	+295	+ 68	+123	0	0	+ 49	+ 49	+117	+ 64																
4	X	+ 62	+ 98	- 49	- 62	- 68	0	+123	+ 68	+123	+ 49	0	+ 92	+129	+ 49	- 49	+129	+209	+111	+172	+ 80	- 68	+ 62	- 62	0	+ 50																
5	X	- 49	0	+ 62	+ 62	-135	0	- 12	+117	+178	+148	+ 49	- 62	- 55	+ 49	+ 86	+123	+ 62	+111	+ 12	0	+ 12	+ 25	+ 49	+ 86	+ 38																
6	X	-117	- 37	- 49	0	- 37	0	0	+172	+252	+209	+ 98	+172	-129	-117	- 12	+ 68	0	+ 62	+ 25	+154	+172	+744	+ 25	0	+ 69																
7		+ 62	+111	- 49	+ 62	+ 62	+117	- 62	+ 86	+141	- 68	- 62	+111	+172	+ 62	+ 86	- 49	+ 62	+154	+191	+ 62	+123	+246	0	-209	+ 59																
8		+357	+ 31	+135	+172	+ 49	- 98	+ 12	+178	+191	+ 74	0	+ 62	-197	+129	+308	+178	+615	+332	+935	+ 62	+676	+406	+363	+ 62	+206																
9		-184	- 43	-394	- 74	-252	+ 72	0	+ 49	+117	+ 98	-252	- 68	- 49	- 49	-111	0	+ 62	+ 68	+123	0	+117	+ 92	+ 74	+172	- 18																
10	X	+ 74	+123	+ 49	+148	0	+172	+ 86	- 49	+ 68	- 49	- 92	0	- 62	+ 68	-123	- 49	+129	+184	0	+111	+ 55	+ 74	+ 12	+123	+ 44																
11	X	+ 62	+ 25	+ 25	+ 80	+ 68	+ 49	+178	+178	+ 92	- 68	-172	-191	-117	- 25	+ 62	+ 98	+209	+129	0	+135	+ 74	+ 31	+ 25	+ 37	+ 42																
12		- 68	0	- 62	-129	- 49	- 12	+154	+184	+357	+486	+111	+424	+437	+351	+ 98	+111	-258	+ 68	-234	+221	-184	- 49	+166	+ 92	+ 44																
13		-309	+ 31	0	+123	- 62	0	0	+111	+215	+ 31	- 62	+111	+117	+148	- 86	+240	+ 74	+ 68	- 62	-172	+ 62	+191	- 68	+480	+ 52																
14		+184	-332	-191	0	- 62	- 68	+ 62	+178	+320	+178	+129	+ 62	+197	- 37	-252	-308	-111	+ 68	- 12	0	- 49	0	+ 62	0	+ 1																
15	X	0	0	- 37	- 49	- 55	+ 31	+ 62	+215	+191	- 25	-215	- 49	+ 62	+ 74	+ 62	+ 49	0	-111	- 49	- 68	- 49	+111	+178	-129	+ 8																
16		+129	+ 49	+ 37	- 0	- 25	- 49	+ 12	+221	+184	+ 62	- 68	+234	+184	+ 92	+191	+154	+154	+ 80	- 62	- 49	- 43	+ 62	+ 82	+ 55	+ 69																
17	X	+ 49	+ 62	+ 86	- 62	- 74	- 92	+ 25	+160	+123	- 49	-135	+ 62	+ 49	- 68	- 62	- 49	+111	+ 68	+ 62	+ 62	+111	0	- 62	0	+ 16																
18	X	- 62	- 49	- 31	- 12	- 12	0	0	+ 31	+258	+221	+ 98	0	+ 37	+ 18	-160	-197	-172	0	+ 74	+111	+184	+172	+363	+160	+ 56																
19		0	+246	- 62	- 62	-154	- 74	+129	+357	+ 25	-277	- 74	-135	+ 37	+338	+363	+252	+732	+449	- 43	+289	+750	-283	-308	-252	+ 93																
20		-320	0	- 68	-406	+135	+308	+184	-117	-117	- 37	+ 74	+314	+301	+461	+437	- 86	+504	+246	- 31	-135	-111	+301	0	- 92	+ 36																
21		-129	-123	- 86	0	+ 49	- 31	+184	+184	-178	-246	-129	+123	+351	+184	- 68	- 25	+123	+184	+430	0	- 86	-148	-117	- 98	+ 16																
22		-295	-172	+ 86	- 86	+ 62	+ 31	+ 86	+295	+258	- 49	-234	-135	-197	- 49	- 92	+ 68	-129	+172	+ 86	- 49	- 62	+ 25	-412	-184	- 41																
23		+430	+824	-160	- 98	+111	+271	+264	+338	+221	+344	- 86	+117	+160	+ 92	+322	+480	+812	+430	-141	-308	+246	-621	+123	+424	+233																
24		-184	+160	+301	-123	+314	+209	+308	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		..	..	..	..	..	..	..	-326	0	+ 74	+ 92	-154	-375	..	..	..	+424	+437	+676	+246	-369	-707	- 62	- 98	..						
26		-197	-308	-184	- 92	-129	- 62	- 31	- 55	- 68	-301	+ 6	+203	+732	-763	-430	-154	0	+560	+775	+375	-240	-111	-314	-332	- 47																
27		-338	- 62	-338	-160	-135	+ 62	-117	+ 86	+252	-215	+ 55	+197	+240	+295	+554	-209	+184	0	+430	-430	+271	-178	- 62	- 31	+ 15																
28		- 55	-135	- 62	-111	-301	+203	+123	-184	+295	+246	- 74	- 49	+ 74	- 86	+ 62	+240	- 68	-178	+178	+ 49	- 68	+ 68	- 74	-172	- 3																
29		- 49	- 92	-344	+338	+221	-209	-400	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30		..	..	..	..	..	..	..	+221	+793	-184	-228	+781	-117	- 62	+658	-424	- 25	-283	-240	-271	- 55	-332	-892	- 86	..									
31		-135	-123	-277	- 59	..	..	- 25	..	..	..	-357	-609	-480	+129	-369	+295	+892	-301	+ 62	-154	+547	-154	+338	-775	..											
MEANS		- 25	+ 11	- 61	- 26	- 38	+ 40	+ 65	+128	+146	+ 41	- 32	+ 54	+109	+ 51	+ 5	+ 35	+143	+136	+123	+ 29	+ 82	+ 66	- 3	+ 20	+ 49																
ALL DAYS		+ 14	+ 14	- 10	+ 19	- 41	+ 28	+ 58	+118	+140	+ 70	- 13	+ 19	+ 14	+ 5	- 11	+ 7	+ 67	+ 76	+ 50	+ 85	+ 72	+160	+ 37	+ 49	+ 43																

* = 10 LEAST DISTURBED DAYS

TABLE 253

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 3 E									
		NORTHERLY										58.4																			
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+392	+381	-635	+935	-115	-231	+306	-248	+733	+277	+173	+225	+127	-87	-121	-144	-179	-144	-29	-121	-115	+23	-150	-40	+51					
2		+63	-138	+69	0	-110	+115	+260	+427	+196	-410	-467	+490	-121	-589	-104	-271	+231	+248	+265	+771	+58	+704	+537	-565	+111					
3		+381	+133	-831	0	-98	-58	+294	+288	-173	-150	-779	-629	-946	-715	-323	+358	+312	+179	-23	+17	+29	+23	-35	0	-102					
4		+58	-265	+150	+115	+167	+242	+219	+340	+173	-110	-542	-467	-398	-202	+75	+121	+173	+104	+58	-63	+288	-127	+92	+52	+11					
5		-29	-29	-225	-58	+115	+231	+346	+692	+462	-58	-433	-369	-398	-104	-144	-115	+104	+548	-138	-127	0	-202	+127	+219	+17					
6	X	+115	+138	0	+167	0	+121	+225	+502	+340	-196	-473	-467	-306	-231	-121	-115	-87	+46	+58	+63	0	0	0	-12	-10					
7	X	0	+12	+46	+29	+69	+121	+312	+577	+508	+81	-410	-534	-358	-288	-190	0	+115	+162	+63	+81	+58	0	-12	-52	+14					
8	X	+23	-29	0	+63	+23	+162	+283	+629	+640	+138	-427	-519	-410	-381	-271	-115	+58	+242	+110	+29	-12	-58	-46	-46	+4					
9	X	-29	0	0	+23	+58	+63	+260	+346	+577	+260	-58	-277	-369	-517	-479	-179	+104	+283	+58	-35	0	+46	+63	-23	+5					
10	X	0	0	+46	+92	+63	+115	+231	+583	+340	-162	-456	-462	-410	-398	-283	-162	+87	+179	+127	+58	+69	+58	+138	+58	-4					
11		-75	+58	+46	+127	+162	-58	+329	+462	+375	-92	-219	-352	-346	-300	-162	0	+29	+127	+87	+23	-12	-17	-23	-46	+5					
12	X	-52	+58	+138	+87	0	+121	+282	+577	+231	-283	-393	-288	-277	-288	-173	-121	-35	+254	+127	+167	+162	+231	+121	-150	+20					
13		-87	0	+69	0	+179	+202	+369	-57	+577	+340	-237	-398	-300	-288	-167	-104	+58	+260	+260	+231	+231	+375	+288	+213	+83					
14		-312	-58	0	-35	+110	0	+185	+254	+490	+58	-173	-208	-225	-196	-294	-173	+104	+58												
15		+138	-29	-467	+208	+138	+162	+242	+894	-237	-144	-225	-98	-104	-87	-179	-63	+150	+346	+375	+237	+185	+167	-208	-69	+56					
16		+58	-369	+58	+81	-63	+104	+277	+450	+317	+58	-277	-531	-340	+81	-81	+323	+288	+162	+63	+208	+133	-69	0	-69	+36					
17	X	+294	+144	+150	+110	+29	+185	+294	+392	+202	-352	-519	-467	-271	+23	+92	+162	+156	+121	-52	-35	+58	0	+46	+173	+39					
18	X	+58	+81	+87	+167	+23	-35	+225	+462	+288	-87	-225	-242	-283	-335	-288	-115	-110	+46	+196	+121	+104	+283	+196	0	+26					
19	X	+63	+92	+162	+110	+121	+81	+121	+260	-104	-277	-317	-58	+144	+121	-52	-58	-58	+29	+87	+115	-115	-58	+115	-58	+19					
20		+173	-12	+58	+121	+58	+179	+398	+404	-63	-404	-715	-450	+75	-87	-58	+144	-144	-231	+144	+92	+133	+208	+121	-75	+3					
21		+63	-121	+63	+358	+144	+294	+519	+715	+410	-81	-456	-623	-404	-179	+81	+237	+375	+346	+288	+242	+237	+288	+185	+283	+136					
22		-248	-173	+173	+162	+81	+173	+415	+92	+381	+104	-635	-548	-415	-346	-231	-52	+277	+237	+392	-162	-121	-46	-104	-46	-27					
23	X	+127	+81	+144	+162	+185	+173	+237	+490	+340	-52	-294	-462	-404	-439	-202	+81	+485	+589	+231	+98	+87	-12	-87	-46	+63					
24		-58	-23	-138	+40	+167	+173	+398	+58	+398	-29	-237	-288	-346	-173	-104	-173	0	+179	+162	-127	+1846	+456	-398	-462	+55					
25		-467	-92	-167	-58	+58	+162	+340	+231	+312	-260	-150	-104	-150	-144	-150	+173	+681	+485	-121	+583	-115	+150	-104	-225	+36					
26		-81	-58	-115	-179	-167	+196	+104	+167	-46	-173	-173	-138	0	-254	-46	-110	+110	+173	+185	-29	0	+115	+58	-23	-20					
27		+29	+69	-110	+225	0	-46	+156	+144	+115	+63	-92	-173	-294	-404	-335	-138	+52	+208	+185	-52	-63	+58	+29	0	-16					
28		-81	-35	-87	-150	+185	+242	+548	+496	+306	-133	-167	-231	-242	-248	-254	-202	+242	+375	+150	-104	+173	+364	0	+23	+49					
29		-167	-121	-58	-63	+104	+288	+312	+185	+167	-231	-427	-298	-75	-173	-58	-63	0	+92	+52	-52	-115	-69	-29	+144	-28					
30		+121	+115	-254	+387	+58	+364	+404	+185	-138	-519	-456	-346	-58	-150	+23	+254	-58	+98	+63	+12	-23	+58	-63	+167	+23					
MEANS		+16	-6	-54	+108	+58	+128	+296	+376	+271	-94	-342	-312	-253	-248	-153	-21	+117	+193	+118	+110	+113	+101	+32	-15	+22					
ALL DAYS																															
MEANS		+60	+58	+77	+101	+57	+111	+247	+482	+336	-93	-358	-384	-294	-279	-197	-62	+72	+195	+100	+66	+41	+49	+53	-16	+18					
10 DAYS																															

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9 DIRECTION E 0.5 N										MEAN				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20		20-21	21-22	22-23	23-24
1		+368	-441	-705	+184	+319	-31	-153	-184	+852	+74	+276	+484	+74	-92	-141	-116	-245	-129	-221	-74	-270	+61	-129	-37	-12
2		+61	-196	+129	+98	+67	+110	+239	+429	+276	-67	-270	+699	+257	-417	+313	+92	-202	-123	+331	+428	+846	-705	+809	-895	+138
3		+711	+31	-748	-98	-288	-184	+20	-159	-362	+156	-270	-515	-374	-184	-319	+466	+325	+251	-18	0	+61	0	-49	-74	-65
4		0	-441	+86	0	+110	+178	+49	+123	+300	+294	-80	-239	-257	-61	+116	-74	+86	-18	+37	-55	+184	-300	+245	+98	+16
5		-116	-123	-184	-129	-12	+74	+172	+405	+374	+123	+49	-61	-129	+123	-153	-184	-67	+331	-129	-153	-116	-521	+153	+392	+5
6	X	+123	+104	+49	+116	-55	+55	+67	+245	+276	+61	-74	-159	0	-129	-67	-184	-233	-86	+49	+25	0	-6	-12	-55	+5
7	X	-67	-18	0	-67	0	+12	+67	+356	+356	+184	-55	-196	-67	-245	-190	-31	-55	0	+31	0	12	0	0	-67	-3
8	X	-37	-61	-67	-61	0	+49	+43	+349	+429	+233	-61	-184	-172	-184	-123	-55	+123	+67	+55	-49	-25	+37	-61	+3	
9	X	-25	+61	-49	0	-31	-55	+61	+172	+294	+319	+221	+110	-55	-276	-306	-190	-61	+135	0	-55	-49	-31	0	-61	+5
10	X	-55	-61	-74	-92	-61	-61	+61	+374	+221	-61	-172	-123	-86	-123	-123	-123	0	+110	+86	+31	0	+61	+129	+86	-2
11		-172	-61	-61	+86	-61	-178	+172	+153	+55	+86	+129	+37	-55	-61	-61	+67	0	+37	+61	+31	-67	-12	-61	-49	+1
12	X	-61	+61	+67	+74	0	+67	+129	+343	+116	-116	-123	-55	-110	-116	-123	-123	-123	+153	+221	+129	+166	+221	+37	-147	+29
13		-159	-80	-49	0	+67	+123	+196	+147	+386	+368	+74	-61	+49	-104	-55	-55	+61	+178	+110	+208	+208	+398	+233	-166	+87
14		-196	-18	-147	+12	+49	-74	-61	+123	+313	+245	0	-61	+49	-43	-61	-31	+178	+31	-12	-61	-74	+129	+67	+123	+20
15		+129	-184	-435	+147	+80	-55	+190	+809	+67	-239	-37	+245	+178	+208	-12	+31	+251	+405	+294	+190	-172	-239	-92	-55	+71
16		-74	-368	+43	+61	-67	0	+31	+245	+196	+233	+67	-362	-319	+67	-184	+12	+276	+159	+74	+135	-172	0	-49	-233	-10
17	X	+264	+178	+74	+67	-55	+67	+67	+233	+208	-61	-159	-104	-123	-31	+12	+55	-12	+12	-61	-86	+61	-67	-61	+129	+25
18	X	+61	-12	-31	+153	-110	-123	-18	+190	+153	+12	+49	+74	0	-129	-184	-123	-215	-67	+184	+153	+166	+245	+37	-92	+16
19	X	-61	-55	+67	+37	+12	-61	-123	+37	-166	-239	-55	+196	+306	+159	+98	+61	-129	-98	+49	+153	-129	-178	+190	-61	0
20		+190	-80	-110	-49	0	+67	+67	+368	-55	-245	-306	+116	+313	-25	-67	+25	-184	-429	+159	+92	+184	+319	+110	-55	+17
21		+67	-276	0	+221	+123	+196	+294	+497	+447	+178	-110	-300	-184	-55	+80	+245	+245	+172	+294	+276	+61	+319	-25	+129	+121
22		-644	+245	+67	+184	+25	0	+208	-49	+202	+245	-178	-196	-92	-129	-196	-172	0	+61	+435	-306	-123	-49	-98	-12	-24
23	X	+172	+74	+67	+153	+184	+251	+80	+423	+356	+276	+172	+104	+110	-147	-98	+25	+417	+478	+74	+80	+49	+31	-49	+31	+138
24		-55	0	-153	+31	+196	+245	+325	+153	+227	+178	+80	+55	0	+147	+190	-110	-55	+37	0	-337	+1888	+2152	+141	-257	+213
25		-398	-178	-233	-184	-104	0	+208	+184	+208	-61	+270	+625	+680	+331	+564	+141	+644	+337	+221	-233	+208	+300	-411	+306	+143
26		-80	-37	-343	-98	-86	0	-129	+110	0	+67	+123	+208	+288	+190	+110	-74	+110	+80	+61	-104	-123	+239	-92	-12	+17
27		-55	+12	-178	+110	-74	-49	+178	+49	+67	+159	+147	+202	+67	-92	-178	-215	-116	+98	+147	-55	-110	-55	-25	-86	-2
28		-49	-18	-55	-104	+31	+67	+294	+460	+245	-86	+104	+37	+37	+61	-110	-86	+184	+129	+270	-104	-92	+129	+31	-61	+55
29		-104	-98	-104	-67	+37	+123	+123	+80	+208	-116	-221	-67	+98	+67	+61	+37	+67	+123	+86	-67	-123	-67	-80	+123	+5
30		+86	+12	-331	+135	+135	+196	+251	+564	+184	-313	-337	-86	+86	0	+172	+398	+55	+178	-67	-67	-61	-49	-166	+153	+47
MEANS																										
ALL DAYS		-6	-68	-114	+31	+14	+34	+106	+241	+214	+63	-25	+14	+19	-43	-37	-12	+38	+90	+94	+41	+78	+77	+27	-32	+35
MEANS																										
10 DAYS		+31	+21	+10	+38	-12	+20	+43	+272	+224	+61	-26	-34	-20	-122	-116	-76	-47	+76	+70	+48	+20	+25	+31	-30	+22

* = 10 LEAST DISTURBED DAYS

TABLE 255

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTH-EAST										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	+232	+116	+232	+87	0	+122	+99	+46	-29	-372	-203	-325	+46	-238	-139	0	+232	+116	+134	+105	+227	-23	+221	+99	+33						
2	X	0	-58	+105	+198	+116	+116	+174	+302	+221	-261	-494	-93	0	-46	+58	+58	-17	+70	+81	+58	-52	+46	0	-58	+22						
3	X	-58	+145	+180	+157	+238	+244	+296	+296	-81	-290	-354	-145	-180	-163	-110	-163	-93	+116	+116	+139	+58	-17	-23	+116	+18						
4	X	-12	+139	0	0	+105	+168	+227	+290	0	-174	-232	-186	-122	-105	-81	-52	+64	+198	+58	+58	-64	-105	+29	0	+8						
5		+29	-174	+180	-12	+174	+238	+314	+436	+256	-349	-494	-639	-465	+58	+105	+267	+296	+203	+122	+93	+64	+58	+58	0	+34						
6	X	-46	+58	+58	+70	+116	+168	+279	+407	+290	-58	-465	-535	-395	-227	-52	+87	+128	+180	-64	-116	-52	+87	+407	+145	+20						
7	X	+349	+232	+12	+76	+163	+116	+174	+302	0	-290	-418	-401	-349	-285	-128	-46	+314	+221	+128	+58	0	-64	-58	-29	+3						
8		-58	+46	0	0	+46	+116	+395	+546	+209	-105	-349	-238	-168	-180	-105	-35	+46	+186	+244	+46	+232	+500	+349	-320	+58						
9		-232	-58	-58	-70	-58	-116	+320	+221	+360	+58	+122	-46	-221	-459	-331	+105	-70	-76	-93	-12	-145	0	+465	+174	-9						
10		+162	0	-58	-180	+46	+279	+227	+221	-232	-93	-418	-203	-186	+64	+151	-12	+110	+58	+198	+616	-261	-17	+267	+116	+36						
11		-162	-424	+105	+227	+261	+279	+232	+64	+52	-110	-366	-267	-221	-110	0	0	+23	+290	+93	+162	+29	+471	+58	-552	+6						
12		+465	-70	+58	-93	+58	+290	+209	+314	+139	-349	-442	-180	+23	-35	+17	+238	+180	+58	+110	0	0	+221	+23	-58	+49						
13		-52	+116	0	+116	0	+58	-29	0	+232	+320	-64	-139	-320	-256	+64	+29	+116	+232	+168	-76	-64	+70	-267	+302	+23						
14		+232	+64	-64	-12	+116	+349	0	+354	+174	-64	-198	-174	-331	-87	-64	+180	+325	+122	+145	+81	+430	+209	+349	+46	+91						
15		+290	+58	-261	+285	-52	0	+162	+354	+110	-320	-349	-349	-261	-12	+232	+203	+453	+157	+308	-110	-116	-52	+64	+58	+36						
16	X	+64	+105	+128	+261	+64	+354	+476	+389	+116	-261	-535	-482	-227	-203	-122	+87	+285	+366	+29	+64	+70	+203	+116	+232	+66						
17		+128	+250	+186	+261	+122	+296	+407	+395	-203	-122	-459	-325	-180	-285	+105	+174	+198	+500	+424	0	+174	-70	+877	+459	+138						
18		-110	+215	+1075	+413	-58	+500	+221	+424	+81	+12	-354	-296	-64	+97	+174	+261	+523	+430	+261	-430	+174	-174	-52	0	+138						
19		+174	+180	-76	+302	+209	+453	+546	+349	+250	-174	-383	-535	-250	-23	+296	+58	+215	+296	+192	-174	-52	+221	+290	-87	+95						
20		-110	-99	+81	+139	+232	+134	+517	+569	+349	-174	-552	-395	-285	-145	+29	+105	+174	+162	0	+64	+569	+273	-378	-105	+48						
21		-46	0	0	+122	+174	+325	+476	+471	+116	-378	-749	-755	-238	-256	+116	+337	+250	+256	+598	+755	+430	-285	+139	-872	+83						
22		+657	-174	+236	-93	-116	+430	+354	+203	-76	-290	-378	-418	-250	-58	-64	+227	+308	+232	-23	+23	+232	-70	-76	-116	+32						
23		-46	-46	-70	+116	+174	+232	+343	+349	+221	-244	-517	-337	-790	-203	-139	+180	+256	+285	+162	+116	+877	+988	+500	-662	+73						
24		-215	-389	+116	+1284	+755	+883	+203	+349	+186	-256	-232	-145	-227	-81	+12	+58	+285	+523	+105	-203	-64	-116	-116	-87	+110						
25		-139	-64	-46	+58	+145	+162	+285	+372	+151	+23	-285	-581	-180	-162	+64	+116	+174	+92	+64	+279	+261	+203	-168	+162	+41						
26		+378	-511	+162	0	+261	+308	+395	+349	+64	-29	-314	-552	-122	+105	-93	+360	+215	+517	+41	-46	-35	+58	-256	+244	+62						
27		0	-58	+110	+87	+139	+267	+279	+116	-87	-296	-273	-401	-174	-93	-46	+232	+261	+97	-70	+261	+442	+389	-343	+70	+37						
28		-494	+198	0	+81	+58	+174	+290	+261	+395	+162	-290	-227	-320	-337	-145	-58	+70	+320	+337	-87	0	+64	-81	+87	+19						
29	X	-52	-122	-58	+145	+139	+168	+116	+418	+349	-23	-320	-459	-535	-227	-256	+58	+395	+320	+122	+58	+58	+12	+58	+35	+17						
30	X	-151	+64	-52	+105	+64	+221	+285	+407	+314	+151	-238	-453	-604	-337	-105	-58	+162	+221	+261	+157	0	0	-35	+58	+18						
31	X	+23	+17	+64	+110	+174	+174	+302	+290	+174	-203	-343	-285	-174	-116	-122	0	0	+162	+122	+93	-58	-58	0	+46	+16						
MEANS ALL DAYS		+39	-8	-78	+137	+125	+242	+277	+318	+132	-147	-353	-341	-251	-142	-22	+97	+190	+222	+141	+66	+109	+97	+110	-16	+46						
MEANS 10 DAYS		+35	+70	+67	+121	+118	+185	+243	+315	+135	-178	-360	-336	-254	-195	-106	-3	+147	+197	+99	+67	+19	+8	+72	+64	+22						

* = 10 LEAST DISTURBED DAYS

TABLE 256

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	+128	+147	+183	+67	0	+73	+128	+55	0	-196	+122	-55	+177	-196	-49	+67	+177	+232	+159	+238	+183	-153	+196	+61	+73					
2	X	-61	-122	0	+73	0	-61	+61	+251	+232	-61	-214	0	+73	+134	+171	+61	-31	+73	+122	-61	-55	+73	-18	-92	+23					
3	X	-257	+110	+189	+153	+183	+92	+122	+128	-98	-171	0	+196	+92	+61	0	-110	-122	0	+61	-31	+73	0	-49	-196	+18					
4	X	+61	+116	0	-73	+67	+122	+122	+122	+31	-61	-61	-61	-61	+61	+116	+67	+183	+153	-49	0	-92	-86	+67	-12	+30					
5		0	-251	+73	-122	+67	+153	+208	+360	+257	-122	-244	-336	-208	+275	0	+122	+189	+67	-24	-37	+61	+49	-12	-67	+19					
6	X	-73	-18	0	-24	+49	+12	+67	+312	+318	+189	-232	-293	-189	-49	+92	+116	+61	+98	-153	-208	-67	+110	+275	+281	+28					
7	X	+183	+299	+61	+86	+61	-31	-24	+134	+110	0	-49	-122	-196	-153	-67	-122	0	+183	+196	+171	+18	-67	-134	-86	+19					
8		-67	-61	-49	-49	-55	-31	+238	+306	+110	-49	-183	0	+98	+183	+116	+31	-49	+73	+183	-98	+244	+550	+312	-403	+56					
9		-244	-177	-92	-116	-67	-73	+214	-92	+238	-18	+244	+306	+171	-189	-238	-92	-122	-159	-110	-116	-159	+55	+238	+196	-17					
10		+177	-49	-183	+37	+24	+86	+67	-12	-122	+122	-128	-31	+98	+312	+367	+122	+86	+61	+183	+354	-238	-49	+306	0	+66					
11		-214	-251	+49	+122	+257	+61	+61	-86	-86	0	-61	-189	+67	+73	0	-37	-61	+214	+92	0	-134	-79	+275	-538	-19					
12		+422	-37	0	-37	-61	+92	+61	+159	-12	-354	-299	0	+232	+86	+183	+330	+342	+61	0	-55	-189	-128	0	0	+44					
13		-110	+98	-37	0	-73	-31	-134	-116	-49	+73	+183	+293	0	-79	+244	+92	+244	+299	+110	-214	-306	-67	-324	+61	+7					
14		+98	-86	-128	-24	0	+196	-61	+122	+196	-55	-177	0	-92	0	-55	+183	+269	+61	+31	-153	+177	+367	+367	+61	+54					
15		+183	+122	-269	+141	-61	-116	+73	+354	+196	-251	-232	-183	+122	0	+98	+367	+483	+110	+122	-330	-324	-238	-122	-92	+6					
16	X	-122	-55	0	+177	0	+128	+299	+330	+183	-49	-269	-397	-244	-257	-244	+37	+220	+293	-61	+6	-67	+73	+122	+110	+9					
17		+37	+122	+49	+98	-61	+128	+208	+342	-43	+147	-67	-116	-49	-232	+128	+122	+122	+391	+275	+153	+110	-110	+244	+92	+87					
18		-244	+306	+428	+183	-244	-61	-49	+293	+61	+360	+61	-116	-122	-61	+61	+104	+232	+342	+214	-477	-49	-73	-55	-49	+44					
19		-61	+153	-92	+232	+61	+128	+299	+293	+379	+189	+92	-183	-183	+55	+189	-275	-67	+196	+153	-49	-61	+153	+257	-110	+73					
20		-43	-220	+61	+24	+171	-49	+171	+489	+379	+141	-110	-196	-128	0	0	0	+31	+24	-67	-24	+470	+244	-244	-98	+43					
21		-55	-49	-98	0	+110	+214	+397	+379	+299	-116	-299	-422	-67	-318	0	+299	+122	+238	+440	+794	+299	-293	+745	-929	+70					
22		+257	+61	+293	+477	+415	+428	+318	+428	+415	+293	+196	-67	-55	+134	+98	+318	+354	+293	+171	+244	+244	+177	+177	+67	+239					
23		+116	+183	+257	+306	+318	+293	+306	+422	+397	+98	-92	+153	-220	+287	-202	+171	+306	+147	+214	+220	+782	+1002	+855	-275	+252					
24		+196	-489	+367	+971	+367	+750	+440	+544	+159	-263	+153	+318	+220	+214	+116	+92	+214	+507	0	-690	+293	+49	-69	-73	+183					
25		-122	-92	+61	+98	+128	+214	+153	+189	+128	+171	-116	-336	+67	+92	+183	+147	+189	+110	+61	+214	+354	+208	-684	+415	+76					
26		+391	-336	+110	+24	+238	+73	+171	+220	+177	+183	+324	+232	+165	+354	+244	+721	+226	+324	+37	+86	-183	-244	-666	+422	+137					
27		+61	-73	-31	+67	+73	+61	+238	+122	-67	-306	-67	-189	+61	+128	+147	+489	+360	+159	-67	+318	+342	+330	-336	-147	+70					
28		-251	+214	0	+55	-67	+49	+37	+141	+385	+244	-55	+128	-61	-92	+61	-92	+67	+299	+189	-12	+37	-55	+61	+49	+55					
29	X	0	0	0	+67	+67	+55	0	+238	+306	+67	+86	-116	-226	0	-134	+86	+244	+189	+86	+37	0	0	+61	0	+46					
30	X	-134	+61	-31	+110	+67	+92	+73	+177	+183	+214	-24	-128	-189	+73	+220	+18	+171	+110	+147	+183	+61	+55	-55	+43	+62					
31	X	+61	+67	+116	+116	+116	+55	+128	+189	+183	-12	-31	+61	+116	+61	-67	-18	-116	0	0	+73	-61	-55	+61	+31	+45					
MEANS ALL DAYS		+10	-10	+42	+104	+69	+100	+142	+219	+156	+13	-50	-60	-17	+31	+57	+110	+139	+166	+88	+17	+57	+66	+60	-41	+61					
MEANS 10 DAYS		-21	+60	+52	+75	+61	+54	+98	+194	+145	-8	-67	-92	-65	-21	+4	+20	+79	+133	+51	+41	-1	-5	+53	+14	+35					

* = 10 LEAST DISTURBED DAYS

TABLE 257
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

JUNE 1940

JUNE 1940

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+ 58	+ 35	+ 64	+116	+169	+233	+343	+466	+169	-361	-710	-687	+285	- 64	+140	+413	+402	+221	+ 58	+105	+233	+198	+285	- 52	+ 88
2	X	-277	- 52	+ 64	+116	+244	+169	+553	+535	-501	-931	-634	-285	0	+140	+180	+512	+407	+233	+ 12	- 58	- 52	0	- 29	- 58	+ 14
3	X	0	- 29	+116	+116	+308	+320	+291	+314	-268	-524	-867	-436	- 70	+105	+157	+343	+343	+431	+ 64	-122	-116	-116	+ 23	- 23	+ 15
4	X	0	0	+ 23	0	+116	+262	+431	+338	+140	-233	-681	-599	-256	-175	0	+291	+221	+239	- 23	- 64	- 81	0	+116	+169	+ 10
5		+279	+175	+116	+ 23	+ 64	+ 93	+367	+611	+314	-116	-442	-669	-640	-524	-407	+ 93	+460	+425	+640	+431	+652	0	+960	+268	+132
6		+111	-663	+431	+204	+163	-105	+466	+646	+198	+116	-431	-570	-431	-367	- 58	+291	+378	+313	+320	+326	+262	-332	-291	-268	+ 31
7		-291	- 70	-728	+582	+326	+221	+675	+786	+291	+ 93	-250	-518	-454	-489	-128	-210	+221	+372	+396	-175	+ 58	+244	+210	-116	+ 44
8		-186	-256	+105	+175	+186	+215	+402	+390	+704	+140	-233	-535	-576	-378	-471	+ 99	+ 58	+122	+146	- 47	+322	+343	-192	-239	+ 13
9		-227	-396	-227	+524	+466	+349	+338	+442	+402	+192	-471	-821	-325	-407	+ 29	+175	+396	+605	+227	- 58	0	+ 64	- 47	+122	+ 31
10	X	-227	-105	0	0	+ 58	+140	+349	+279	0	- 81	-175	-180	-291	-274	- 70	-157	+111	+198	+175	0	+ 23	+ 58	+ 17	+ 35	- 5
11	X	+ 17	+116	+ 64	0	+105	+140	+355	+361	+157	+ 12	-239	-407	-553	-338	- 87	+169	+ 58	- 35	+116	- 47	- 35	0	+ 58	+ 58	+ 2
12		0	+ 58	+ 47	+ 58	- 64	0	0	+291	- 64	- 58	-471	-448	-279	+122	- 87	+338	+274	+233	+ 47	- 52	- 58	- 12	+ 29	+ 70	- 1
13	X	+ 47	- 12	+ 52	+ 87	+ 64	+151	+338	+349	+ 58	-105	-454	-466	-122	- 52	- 93	+233	+338	+192	+ 29	- 35	- 64	-157	- 52	+ 64	+ 16
14		+134	+338	+413	+285	- 35	+274	+436	+483	+466	+262	- 93	- 87	-163	-128	+111	+570	+611	+646	+291	+ 17	+518	+431	+175	-285	+236
15		+186	- 58	-501	+175	+239	+431	+ 64	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	..	+326	-233	-471	-663	-367	-227	- 47	- 93	+349	+256	+ 93	+361	+291	- 41	+ 58	+180	..
17		+407	- 64	-274	- 70	-175	+244	+326	+291	+495	0	-314	-698	-559	-163	+175	+122	+431	+221	+ 87	+268	+646	+407	+355	-733	+ 59
18		+116	-116	+227	-244	+204	+274	+518	+413	+338	-274	-582	-611	-314	-291	- 87	+227	+349	+535	+262	+268	+ 35	+326	+407	-140	+ 72
19		-140	-163	+180	+146	+111	+419	+646	+757	+320	-384	-681	-547	-466	+ 58	+297	+466	+413	+291	+ 58	+ 58	+180	+198	0	- 29	+ 91
20	X	- 87	- 58	+116	+233	+233	+180	+407	+559	+629	+291	-384	-687	-640	-407	-122	+250	+489	+256	+ 58	+256	+221	+ 47	+140	+239	+ 92
21		-111	-116	+ 12	+128	+180	+175	+466	+402	+268	+ 35	-495	-751	-553	-140	+175	+227	+244	+349	+466	+1595	+3864	+3463	+2479	+1077	..
22		+669	-454	+239	+204	-250	+774	+815	+920	+460	+146	-320	-279	-122	+105	+215	+291	+210	+111	+879	+ 81	+128	+227	+221	+128	+246
23		+128	+233	+233	+210	+233	+314	+466	+454	+524	+221	-407	-663	-413	-122	+186	+413	+454	+466	+407	+233	..	..	..	..	..
24		..	..	..	..	+1455	+698	+1507	+1566	+2560	+873	+407	+ 47	+122	+175	+210	+355	+146	+163	+169	+163	+1304	+663	+495	+489	..
25		+175	+ 23	+483	..	..	..	..	..	..	+303	+1071	+193	-303	-221	+362	+477	+466	+407	0	+460	+291	+116	+349	+210	..
26		+157	+175	+151	+402	+367	+495	+623	+582	+407	+210	-244	-372	-425	-146	-506	+285	+722	+501	+687	+629	+326	+215	+326	+402	+249
27	X	+297	+349	+285	+116	+244	+308	+693	+733	+722	+198	-297	-343	-274	- 76	+116	+349	+396	+308	+413	+140	+175	+233	+285	+274	+235
28	X	+233	+186	+132	+291	+285	+291	+396	+419	+210	+116	-285	-495	- 47	+175	+221	+191	+116	+198	+250	+186	+175	+198	+262	+180	+165
29		+210	+192	+268	+262	+268	+320	+466	+489	+291	+146	-297	-634	-611	-169	- 64	+338	+512	+623	+646	+768	+279	+116	-210	- 47	+173
30		+ 70	+215	+116	+262	+186	+326	+530	+338	+111	- 87	-105	-244	-349	-180	+ 41	+256	+442	+530	+460	+460	-116	+ 47	+ 64	0	+141
MEANS		+ 59	- 25	+ 85	+162	+152	+254	+448	+491	+252	- 56	-402	-484	-345	-163	- 21	+248	+348	+346	+262	+139	+155	+114	+130	+ 1	+ 90
ALL DAYS																										
MEANS		+ 11	+ 43	+ 98	+108	+183	+219	+416	+435	+132	+162	-473	-458	-197	- 97	+ 44	+260	+288	+224	+115	+ 36	+ 48	+ 46	+110	+ 89	+ 63
0 DAYS																										

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1940

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

JUNE 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD								LINE ON								LENGTH IN KMS 93.9								DIRECTION E 0° 5 N								MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24									
1	X	+ 61	0	+ 61	+ 67	+ 61	0	+ 61	+298	+250	- 67	-298	-304	- 79	+ 91	+177	+329	+183	+140	+ 67	+177	+365	+250	+256	- 49	+ 87								
2	X	-292	- 61	+ 12	+ 61	+116	+ 55	+365	+396	+438	-621	-365	0	+274	+244	+152	+481	+390	+128	0	- 97	- 61	- 55	- 37	- 67	+ 61								
3	X	- 43	- 67	+ 73	+ 97	+183	+ 85	+171	+256	- 73	-244	-481	-116	- 12	+134	+116	+311	+353	+426	+134	0	- 55	- 61	+ 61	- 61	+ 49								
4	X	- 61	+ 37	- 30	- 73	+ 37	+ 97	+134	+244	+195	-122	-353	-268	- 61	+ 30	+ 61	+274	+152	+231	+116	+ 30	- 55	- 49	+183	+ 97	+ 35								
5		+122	+219	+ 61	- 61	-104	-244	+244	+451	+298	+171	- 67	-189	+ 61	- 24	+189	+116	+548	+493	+865	+231	+414	-371	+968	+266	+ 94								
6		+ 30	-621	- 61	+171	+122	-195	+244	+487	+110	+152	- 67	- 55	- 73	-134	+177	+402	+371	+244	+183	+621	-128	-457	-195	-256	+ 45								
7		-311	-164	-700	+341	+274	- 61	+292	+609	+238	+158	+311	- 85	-110	-213	+ 49	-225	+231	-122	+684	-158	-122	+158	-122	0	+ 39								
8		-195	- 73	+ 24	+ 61	+ 55	+ 61	+177	+171	+414	+329	+ 24	- 61	-122	- 97	-402	+110	-171	- 61	- 55	- 73	- 61	+512	-116	-268	+ 8								
9		-201	-189	-317	+396	+244	+122	+134	+365	+378	+152	-183	-274	-518	-171	- 24	+146	+365	+195	+146	+ 24	0	+ 73	- 79	+116	+ 38								
10	X	-426	+ 24	+ 18	- 37	+ 24	+ 61	+122	+ 61	- 67	0	0	+ 73	+110	+ 49	+122	-177	+ 79	+122	+ 85	- 67	+ 61	+ 55	0	- 24	+ 11								
11	X	- 55	+ 97	+ 49	0	0	- 55	+ 91	+231	+134	+195	+ 85	-116	-140	- 73	+104	+207	- 67	-134	+ 18	+ 24	- 55	- 55	+ 12	0	+ 21								
12		- 12	- 30	+ 55	+ 49	-128	-122	-171	+171	- 55	-177	-445	-225	- 55	+438	+ 67	+396	+286	+122	- 55	- 67	- 91	- 61	- 24	+ 49	- 4								
13	X	- 24	- 61	+ 55	+ 61	- 12	+ 37	+ 73	+146	0	0	-238	- 91	+122	+116	- 12	+341	+244	+171	+ 49	- 67	-116	-128	- 67	+ 55	+ 27								
14		-158	+116	+390	+189	- 49	+244	+201	+268	+487	- 24	+499	+944	+378	+183	+292	+767	+682	+396	+317	-420	+128	+274	+256	-420	+248								
15		+298	+ 49	-201	-183	+ 67	+189	+ 30	+171	+384	+ 55	-658	-487	- 97	- 43	+ 85	+183	+183	+ 49	+371	+207	-122	-152	- 55	-110	+ 9								
16		-250	-128	+512	+238	+ 55	- 55	+104	+292	+304	- 97	-158	-335	-177	- 61	0	- 49	+298	+110	- 55	+280	+286	+ 37	- 67	-268	+ 34								
17		+475	+128	-171	- 12	-183	+ 67	+ 61	+122	+359	+ 73	+256	-280	-426	-140	+ 91	- 73	+451	+183	0	+140	+475	+469	+353	-457	+ 82								
18		-110	-286	+536	-122	0	0	+177	+238	+274	-122	-250	-262	-164	-195	- 61	+122	+ 91	+213	+171	+ 61	-256	+171	+329	-134	+ 18								
19		-183	- 97	+ 61	+ 79	- 67	+146	+110	+499	+463	-183	-225	-414	-353	+ 73	+219	+384	+304	+ 37	-146	- 85	+ 37	+ 67	+ 24	- 97	+ 27								
20	X	-183	-110	- 61	+122	+ 49	- 55	+ 37	+298	+426	+292	-110	-408	-426	-298	- 55	+152	+213	+ 73	+ 49	+ 97	+ 97	0	0	+152	+ 15								
21		- 61	-158	- 91	- 12	0	- 30	+152	+183	+268	+250	-171	-371	-292	- 61	+207	+207	+171	+116	+140	+899	+2789	+3057	+2540	+2156	..								
22		+877	+548	+365	0	-128	+207	+518	+780	+524	+432	+ 61	+152	+171	+280	+585	+451	+286	+731	+883	+122	+219	+238	+402	+274	+374								
23		+231	+304	+213	+244	+183	+292	+420	+475	+475	+256	+ 24	-116	+ 37	+183	+359	+414	+353	+195	+122	+420	+1790	+2077	+3112	+1998	+584								
24		+1669	+1133	+1492	+1060	+901	+609	+560	+1181	+1462	+920	+487	+481	+426	+274	+457	+627	+177	+ 67	- 61	+ 91	+1145	+719	- 24	+786	+693								
25		+359	-140	+566	+853	+1492	+487	-250	+311	+481	+414	+ 30	+ 61	+152	+292	+183	+359	+ 91	..							
26		-128	+ 91	+ 67	+201	+244	+335	+414	+420	+304	+183	-189	- 85	-268	+110	-597	+317	+713	+341	+347	+274	+402	+207	+183	+171	+169								
27	X	+146	+219	+171	+110	+128	+256	+323	+524	+536	+ 67	-195	-171	-183	0	+110	+304	+304	+ 85	+219	+ 73	+ 73	+122	+171	+128	+147								
28	X	+122	+122	+ 79	+195	+128	0	+ 91	+213	+ 67	+110	- 73	-365	+ 61	+304	+238	+158	0	+ 85	+ 67	+ 85	+ 73	+128	+171	- 61	+ 83								
29		+ 67	+116	+116	+128	+122	+122	+189	+304	+359	+146	-128	-487	-542	-171	-104	+213	+420	+548	+487	+786	+183	+189	-238	- 61	+115								
30		+ 12	+122	+ 73	+122	+ 73	+ 97	+274	+359	+ 67	0	+183	+122	-189	-116	+146	+213	+304	+414	+438	+116	+146	-110	+122	- 67	+122								
MEANS ALL DAYS		+ 53	+ 51	+105	+125	+ 86	+ 82	+194	+356	+313	+ 73	- 91	-722	- 84	+ 28	+ 91	+246	+277	+196	+194	+101	+170	+152	+199	+ 60	+119								
MEANS 10 DAYS		- 76	+ 20	+ 43	+ 60	+ 71	+ 48	+147	+267	+191	- 39	-203	-177	- 33	+ 60	+101	+238	+185	+133	+ 80	+ 26	+ 33	+ 21	+ 75	+ 17	+ 54								

* = 10 LEAST DISTURBED DAYS

JULY 1940

JULY 1940

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E									
		NORTH-SOUTH										LINE OF										58.4									
0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN							
1	X	- 58	+174	+174	+151	+145	+354	+465	+407	+354	- 52	-349	-363	-180	-163	+ 23	+314	+459	+396	+221	+ 46	+ 81	+168	+110	+116	+124					
2	X	+ 58	+122	+186	+168	+209	+256	+407	+442	+256	-116	- 70	-337	-256	- 70	+116	+279	+285	+337	+256	- 58	- 58	+116	+221	+494	+135					
3		+308	0	+174	+244	+296	+232	+337	+279	+389	-168	-726	-465	-136	-232	-105	+401	+482	+104	+ 58	0	+296	+203	+290	-447	+115					
4		+ 64	-139	+110	+279	+465	+442	+581	+383	+471	-139	-238	-407	-116	-168	+198	+203	+314	+407	+151	0	+105	+116	+ 93	-116	+128					
5		+459	+ 70	+174	+256	+290	+343	+221	+645	+174	-139	-436	-168	-407	-285	+174	+296	+395	+471	+290	+610	-122	- 35	+ 52	+ 81	+142					
6		-203	+203	+ 76	+279	+285	+209	+383	+151	+279	+203	0	- 93	-174	0	+ 70	- 22	+232	+250	+174	+ 35	+ 87	+122	+105	+157	+119					
7	X	+ 58	+116	+221	+215	+174	+186	+168	+337	+349	+401	- 58	-221	-465	-430	-232	+180	+285	+232	+232	+285	+ 58	+110	+ 58	+168	+101					
8		+ 46	+ 81	+ 58	+168	+198	+192	+413	+610	+430	- 52	-354	-500	-575	-482	-174	+139	+227	+610	+256	+407	+523	-203	+232	- 46	+ 92					
9		+180	-302	+139	+ 58	- 64	+378	+279	+808	+180	+116	-273	-227	-401	-308	-116	+174	+232	+349	+581	+349	+296	+396	-180	+163	+117					
10		+163	-320	-128	+465	+174	+ 46	+453	+389	+401	+ 70	-134	-651	-337	-139	+128	+616	+ 70	+244	+616	+116	+256	-122	- 23	-168	+ 91					
11		-139	-203	+163	+285	+180	+349	+494	+395	+221	- 23	- 87	-174	-221	-116	- 35	+151	+244	+174	+163	+279	+ 17	+180	+203	+116	+109					
12	X	+ 58	+116	+151	+285	+ 58	+227	+360	+535	+325	- 93	-285	-221	+203	+256	+116	+209	+232	+279	+174	+139	+ 76	+128	+285	+413	+168					
13		+ 81	- 81	-924	+842	+ 99	+395	+308	-383	+1290	+465	+407	0	+ 58	- 70	+116	+337	+116	+285	+ 87	-168	+744	-383	+ 35	-465	+133					
14		+139	+ 81	-162	- 99	+209	+221	+256	+302	+186	-122	-215	- 64	+ 81	+296	+401	+209	0	+ 70	+407	+471	+ 6	+168	-168	- 29	+110					
15		-279	+180	+ 99	+ 93	+232	+168	+413	+558	- 58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	..	- 29	+186	-116	-180	-168	-105	+ 35	+261	+174	+139	+273	+180	- 12	- 35	0	+ 23	..
17		+163	+163	+232	+145	+157	+198	+372	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	+453	+349	+ 46	-261	-511	-372	-174	+163	+349	+296	+279	+174	0	+116	0	- 23	0	..
19	X	+105	+ 46	+116	+180	+238	+209	+395	+505	+261	0	-401	-552	-505	-186	+116	+168	+459	+209	+116	+ 12	+ 64	+ 58	+110	- 52	+ 70					
20	X	+221	+256	+180	+209	+228	+296	+349	+325	+162	-174	-418	-465	-511	-407	+134	+285	+296	+459	+198	+116	+ 64	+ 70	0	+ 93	+ 82					
21		- 23	+ 76	+325	+401	- 76	+755	+517	+453	+122	-285	-459	-610	-593	-337	-290	+325	+290	+511	+360	+238	+459	+343	+343	+726	+149					
22		-128	+ 58	+232	+105	+139	+198	+366	+116	+273	+261	-413	-511	-349	-116	-134	- 70	+110	+523	+209	0	+180	+174	+105	+110	+ 60					
23	X	+ 58	- 23	+ 58	+145	+180	+ 64	+250	+401	+174	0	-459	-529	-407	-261	-105	+261	+744	+407	+349	+139	+337	+232	+203	+ 58	+ 95					
24		- 64	- 76	-215	+308	+238	+389	+511	+662	+296	- 93	-401	-465	-337	-168	+110	+256	+232	+459	+174	0	-325	+290	+105	-203	+ 70					
25		+511	- 35	-465	+250	+256	+296	+349	+418	+407	+209	-459	-465	-413	-302	-128	+ 58	+349	+581	+ 58	+ 87	+395	- 17	+ 46	+105	+ 87					
26	X	- 58	-174	+ 70	+228	+180	+192	+430	+354	+232	- 70	-290	-215	-186	-273	-198	- 52	+174	+296	+128	+ 58	+168	+ 93	+209	+168	+ 61					
27	X	+ 12	+ 46	+ 58	+180	+122	+228	+232	+413	+349	-174	-401	-436	-413	-279	-139	+ 81	+232	+325	+174	+145	+134	+174	+228	+163	+ 61					
28	X	+228	+116	+168	+290	+ 58	+279	+349	+395	+418	+ 58	-290	-529	-523	-232	+151	+372	+354	+244	+105	- 58	+ 46	+ 87	+110	+203	+100					
29		+ 58	+122	+105	+174	+116	+296	+261	+ 58	+238	-110	-180	-261	-418	+ 29	-180	0	+ 58	+174	+116	+ 29	+145	+354	- 46	+ 58	+ 50					
30		+232	+163	+465	+459	+ 23	+261	+174	+ 23	-180	-145	-105	-157	+ 29	- 81	+145	+209	+354	+105	+535	+221	+128	-267	+105	- 87	+109					
31		+279	+ 37	-250	+500	+209	+209	+372	+523	+401	-163	-389	-349	-349	-471	- 17	+198	+314	+244	+686	+325	-523	-232	-105	- 12	+ 62					
MEANS	ALL DAYS	+ 98	+ 21	+ 47	+260	+171	+278	+359	+369	+313	- 12	-277	-350	-294	-185	+ 5	+207	+279	+362	+255	+142	+135	+ 86	+101	+ 65	+101					
MEANS	10 DAYS	+ 68	+ 80	+138	+205	+159	+229	+340	+411	+288	- 22	-302	-389	-324	-204	- 2	+210	+352	+318	+195	+ 82	+ 97	+124	+153	+182	+100					

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1940
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE_OH										LENGTH IN KMS										DIRECTION										E 0.5 N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
1	X	-121	+96	+18	-48	+48	+72	+90	+181	+295	+187	-121	-127	+115	-127	-54	+187	+350	+302	+127	-18	+18	+60	+66	+48	+68																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

* = 10 LEAST DISTURBED DAYS

TABLE 261

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

AUGUST 1940

AUGUST 1940

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		NORTHEAST					LINE ON					58.4					22-23					23-24										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	+ 46	+104	+162	+121	+162	+231	+405	+670	+318	0	-312	-378	-489	-474	- 81	+173	+231	+203	+ 58	0	0	- 58	- 29	0	+ 62						
2		0	+ 64	+ 23	+312	+260	+254	+457	+566	+202	-116	-353	-399	-486	-474	- 81	+173	+237	+243	+ 92	+249	+162	+ 87	+208	+578	+ 94						
3		+647	+214	0	-347	-231	-144	+277	+428	+659	+809	-422	- 58	+ 46	- 64	0	+121	-116	+243	+520	+116	+162	+289	+ 46	- 58	+150						
4		-116	-457	+ 69	+162	+ 46	+179	+399	+381	+312	+139	-127	-358	-410	-272	-185	-116	+225	+252	+231	+283	+173	+270	-434	-156	+ 29						
5		- 81	- 46	-566	+179	+329	+318	+370	+434	+376	+ 64	-162	-376	-514	-179	+243	+ 92	+347	+347	+445	+ 98	+179	+289	- 64	0	+ 88						
6		-144	-566	+150	- 35	+139	+480	+439	+607	+503	-150	-422	-451	-376	-116	-220	+133	+457	+208	+260	- 58	+ 35	+ 46	+405	+289	+ 67						
7		+116	- 81	-503	+129	+173	+ 81	+399	+329	+208	+491	-139	-462	-405	-277	-116	0	+220	+347	+520	+283	+ 64	-168	+ 35	+543	+ 77						
8		-110	-150	-335	-179	+289	+ 75	+110	+347	+225	- 58	-185	-249	-179	- 52	+ 12	-110	- 52	+277	+173	+116	+ 58	+353	+214	+179	+ 32						
9		-243	- 29	-468	-197	+121	-197	+370	+921	+1260	+260	- 81	- 92	-231	-116	- 64	+520	+104	-144	- 46	- 75	- 58	+ 40	+ 69	+231	+ 78						
10		-116	+ 92	-121	-289	0	+237	+358	+168	+ 81	+ 40	-254	-168	-173	-104	+ 58	+173	+173	+144	+231	+428	- 64	-191	+116	- 92	+ 30						
11		+168	- 58	-162	+520	+ 58	+139	+150	+341	+254	-260	-416	-249	-289	-173	+301	+249	+688	+318	+ 69	+335	+191	+104	-335	+324	+ 94						
12		-116	-139	-104	+173	+116	+168	+578	+289	-150	-445	-416	-353	-179	+121	+353	+301	+584	+243	+243	+ 81	- 17	+ 58	+197	+272	+ 77						
13		-185	+ 29	+139	+185	+162	+260	+416	+434	- 29	-289	-347	-277	- 58	- 12	+162	+237	+220	+173	+ 92	-104	..	..	..	..	..	
14		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	..	..	-277	-526	-578	-499	+104	+237	+329	+277	+295	+ 81	+116	+116	+173	+127	+116	..
17	X	+116	+110	+173	+191	+208	+289	+642	+983	+717	-335	-578	-694	-566	-168	+197	+214	+191	+197	+ 64	0	+ 75	+110	+133	+104	+ 99						
18		+197	+295	+434	+387	+127	- 98	+754	+1185	+497	-162	-410	-925	-393	-411	+ 81	+393	+497	+462	+254	+324	+277	+ 75	+ 35	+162	+168						
19		+ 92	+121	+ 58	+ 81	+173	+ 75	+636	+1040	+561	-566	-497	-630	-416	-237	+295	+220	+497	+237	+185	+289	+ 64	+694	+486	+110	+149						
20	X	+ 46	+ 23	+254	+231	-127	+295	+353	+486	+636	+260	-104	-393	-457	-277	-116	+104	+144	+237	+ 46	+ 98	+173	+237	+121	+ 87	+ 98						
21	X	+116	+129	+162	+254	+237	+231	+491	+445	+405	+ 64	-410	-566	-468	-272	+ 58	+260	+162	+329	+133	+139	+173	+104	+ 58	+ 81	+ 99						
22	X	+225	+231	+329	+254	+277	+381	+578	+855	+358	-277	-202	-416	-462	-202	+ 12	+185	+480	+341	+231	+301	+208	+ 92	+ 75	+173	+168						
23	X	+127	+121	+220	+237	+231	+289	+601	+676	+214	- 29	-272	-364	-410	-243	+ 58	+347	+231	+295	+179	+202	+231	+162	+156	+173	+143						
24	X	+104	+121	+110	+162	+182	+173	+243	+514	+624	+231	-191	-214	-277	-173	- 23	+116	+231	+231	+173	+104	+173	+162	+173	+168	+129						
25	X	+162	+214	+150	+173	+173	+173	+335	+682	+694	- 46	-405	-451	-543	-618	-249	+127	+254	+607	+283	+208	+162	+277	+237	+231	+118						
26		+191	+231	+393	+162	+289	+370	+642	+312	+ 52	- 58	-283	-295	-162	-376	-405	+667	+225	+318	+416	0	+289	+110	+116	+353	+157						
27		+347	+ 23	+214	+179	+231	+289	+549	+867	+139	-249	-543	-422	-358	+ 58	+301	+312	+229	+295	+116	+202	+410	+ 92	+ 64	+104	+144						
28		+197	+162	+341	+ 29	+260	+306	+642	+734	+295	-116	-399	-439	-312	-191	+191	+468	+376	+116	+526	- 81	+ 64	+127	+ 69	- 58	+139						
29	X	+289	+231	+ 75	+312	+399	+358	+636	+630	+480	- 58	-347	-335	-231	- 58	+214	+422	+347	+225	- 29	+ 81	+ 98	+ 87	+104	+127	+169						
30	X	+121	+139	+162	+173	+168	+173	+514	+659	+428	-272	-480	-416	-220	- 46	+144	+358	+399	+139	-121	+ 92	+ 64	+ 58	+ 58	+173	+103						
31		+225	+168	+173	+237	+173	+312	+751	+977	+526	+127	-341	-526	-578	-381	- 23	+231	+578	+289	+601	+584	+162	-410	+156	+561	+190						
MEANS ALL DAYS		+ 97	+ 49	+ 52	+136	+182	+201	+470	+612	+403	- 26	-323	-403	-349	-207	+ 41	+240	+294	+263	+217	+163	+130	+118	+ 91	+173	+109						
MEANS 10 DAYS		+135	+147	+180	+211	+189	+259	+480	+660	+487	- 46	-330	-443	-400	-232	+ 36	+244	+267	+281	+102	+122	+136	+123	+109	+132	+119						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1940.

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0.5 N				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	+114	+180	+204	+240	+294	+421	+511	+649	+463	+343	+270	-162	-66	-198	+240	+367	+349	+223	+24	+228	+180	+96	+102	+42	+213
2		+48	+174	-30	+307	+240	+180	+300	+439	+355	+174	+72	0	+66	-541	-48	+132	+186	+288	+60	+505	+186	+48	+228	+415	+158
3		+763	+30	+246	+24	+168	-180	+300	+457	+276	+793	-144	+246	+349	+120	+96	+192	+54	+102	+216	-66	+126	+114	+66	-144	+175
4		0	-300	-72	+60	-78	0	+174	+240	+337	+126	-60	-180	-78	-12	-150	-156	+42	+228	+108	+240	+36	+162	-90	-48	+22
5		+48	+60	-294	+144	+192	+192	+114	+180	+361	+307	+264	+162	-114	+96	+445	+66	+397	+294	+547	+60	-84	+186	+228	+174	+168
6		+60	-361	+210	-84	+180	+288	+319	+439	+469	+325	+156	-84	0	+150	-216	+180	+354	+162	+246	+36	+72	+60	+108	+246	+138
7		+186	+48	-204	+234	+144	-48	+216	+421	+156	+511	+385	-60	-216	+60	+66	0	+72	+228	+535	+409	+96	-126	+54	+349	+146
8		+60	+246	-216	-54	+313	+60	+270	+409	+174	-66	-96	+48	+222	+300	+270	-60	0	+240	+156	+48	-66	+276	-90	+385	+118
9		-361	+288	-120	-60	+331	+186	+511	+535	+112	+517	+228	+144	+180	+72	+180	+535	-42	-282	-114	-60	-108	+42	+96	-36	+157
10		+54	+180	-60	-192	0	+36	+102	-48	0	+168	-54	-36	0	0	+180	+282	+313	..	..	..	..	..	..	..	..
11		..	..	..	..	..	..	..	+60	+451	-96	-174	0	-210	-24	+325	+300	+727	+192	+168	+487	+300	+60	-679	+343	..
12		+60	-60	-54	+138	+126	-48	+240	+162	0	-72	-144	-60	+60	+300	+367	+240	+307	+60	+156	+60	-108	-60	+126	+150	+81
13		-48	+96	+180	+132	+12	0	+126	+240	-54	-12	-114	-144	-60	+66	+132	+120	0	+102	+120	+144	..	..	..	..	..
14		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	..	..	+60	-198	-349	-234	+60	0	+60	+96	+156	+48	+60	+24	+66	-24	-60	..
17	X	0	0	+90	+120	+108	+120	+270	+631	+535	-66	-168	-282	-252	-96	0	-60	-108	-120	-132	-132	-108	-72	0	-30	+10
18		0	+216	+300	+409	+120	-361	+252	+727	+457	+198	+228	-589	-367	-403	+168	+319	+234	+66	0	+54	-60	-120	-174	-30	+68
19		-60	-60	-126	-90	-108	-102	+240	+685	+793	-210	-240	-661	-421	-288	+120	+48	+307	+150	+168	-60	-240	+300	+337	-18	+19
20	X	-60	-228	-18	-90	-294	-132	-60	+234	+649	+541	+186	-156	-385	-391	-361	-192	-198	+48	-108	-60	+48	+180	-48	-114	+42
21	X	-72	-60	-48	+12	0	-60	+24	+355	+361	+132	-288	-282	-457	-361	-66	+114	0	+114	-126	-168	-84	-78	-120	-120	-53
22	X	+18	-24	+108	+48	+60	+120	+192	+529	+325	-54	-60	-313	-427	-114	+60	+72	+180	+66	-54	+180	+18	-144	-174	-66	+23
23	X	-60	-18	+60	+48	+54	+60	+180	+403	+270	+138	-24	-228	-319	-246	-114	+174	+54	+108	0	+168	+156	+120	+108	+114	+50
24	X	+54	+168	+120	+156	+120	+66	0	+204	+282	+126	-120	-30	-60	-90	-114	-174	-108	-60	-66	-84	-48	-54	0	+48	+14
25	X	0	+108	+60	+114	+114	+42	+126	+313	+355	0	-150	-204	-355	-457	-337	-84	-114	-234	+126	+66	+42	+120	+66	+24	-11
26		-66	+12	+126	-240	+234	+222	+252	+114	-30	-126	-174	-210	+90	-243	-228	+853	-120	+300	+138	-240	+36	-228	-258	+240	+18
27		+240	-186	-48	+96	+60	0	+36	+427	+228	-72	-294	-234	-240	+72	+138	-30	0	+48	+6	-90	-84	+210	-18	-60	+9
28		-114	+12	+102	-30	-54	-60	+210	+421	+300	+174	-66	-300	-246	-300	-60	+150	+108	-126	+108	-168	-90	-12	-192	-276	-21
29	X	+108	+54	-96	+54	+144	+72	+288	+294	+421	+120	-186	-234	-156	-60	-72	0	+66	+108	-138	-66	-126	-108	-120	-72	+12
30	X	-60	-60	-12	-48	0	-18	+222	+661	+457	+60	-313	-186	-204	-120	-240	+84	+270	+48	-126	-90	-120	-114	0	-1	..
31		+84	-72	-48	+60	-60	+60	+294	+613	+469	+300	-18	-349	-541	-415	-228	+78	+637	+180	+625	+457	-174	-294	+192	+84	+81
MEANS ALL DAYS		+40	+7	+13	+63	+96	+43	+219	+422	+383	+169	-30	-168	-157	-130	-3	+114	+117	+89	+94	+49	-20	+20	+13	+50	+62
MEANS 10 DAYS		+4	+12	+47	+65	+60	+69	+175	+427	+412	+134	-85	-208	-268	-213	-100	+30	+39	+30	-60	+4	-4	+6	+30	-17	+22

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 263

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		NORTHERLY					LINE					OM					58.4					17° 8' E										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-179	+ 58	+191	+347	-232	+232	+284	+973	+313	+486	+278	- 46	-371	-446	-278	+ 69	+307	+359	+ 29	+ 12	- 58	+139	+ 23	+191	+112						
2		+ 81	+771	+203	-411	+669	..	..	..	..	- 58	-272	-261	-533	-411	+ 17	- 64	+521	+845	+ 58	- 41	+ 58	+179	+845	+197	..		
3		-116	-174	+ 93	- 29	+133	+388	+776	+660	+585	+394	-208	-483	-382	-139	+ 58	+122	+243	+347	+486	-266	-139	+249	-145	- 69	+100						
4		+ 41	+116	+411	-608	+614	+284	+631	+718	+544	+272	- 52	-336	-469	-301	0	- 58	+469	+127	+174	+243	+208	+ 69	+ 46	- 46	+129						
5	X	- 46	- 81	+301	+ 58	+116	+261	+330	+811	+463	-243	-330	-185	-203	- 69	- 87	+116	+226	+174	+179	+290	- 46	+122	+ 75	+197	+101						
6		+295	+643	+ 23	- 64	+226	+446	+405	+579	+515	+116	- 93	-168	-278	-371	-185	- 98	+145	+440	+550	+701	+342	+521	+324	+400	+226						
7		-122	+272	-249	-764	+266	+504	+ 69	+376	+498	0	0	-174	- 87	-156	+232	0	+371	+127	-168	0	+191	+116	+104	+ 29	+ 60						
8		+139	- 41	+179	+220	-156	+232	-226	+486	+342	-151	-243	0	+122	+266	+290	+307	+232	+469	+411	+266	-226	- 58	+116	+ 81	+127						
9	X	+174	0	+168	+347	- 52	+353	+452	+475	+290	+162	- 12	- 35	-203	- 52	+290	+440	+336	0	-133	0	- 46	- 58	+ 64	+127	+129						
10	X	+ 64	+174	+162	+151	+151	+185	+434	+648	+232	- 58	-208	-313	-284	- 23	+290	+347	+208	0	0	+ 93	+ 58	+ 69	+116	+116	+109						
11	X	+122	+174	+179	+301	+295	+284	+452	+313	- 52	-400	-376	-278	- 58	+203	+336	+347	+203	- 58	+ 64	+116	+162	+ 46	+ 58	+104	+106						
12	X	+185	+226	+301	+ 81	+122	+226	+579	+579	+232	- 87	-353	-341	-220	- 35	+179	+261	+220	+ 58	-116	- 58	+104	+116	+127	+127	+104						
13	X	+156	+162	+174	+185	+226	+151	+521	+550	0	-203	-243	-145	-162	0	+174	+278	+174	- 29	+122	+122	+637	-116	- 58	+174	+119						
14		+179	+116	+185	+191	+191	+359	+585	+625	+405	-110	-203	+168	-926	-139	+133	+654	+550	+116	+151	+226	+162	+284	+ 46	+214	+173						
15		+232	- 23	+232	+208	+226	+284	+463	+573	+290	-139	-197	-324	-255	- 58	+139	+232	+232	+145	+ 81	+ 93	+174	+261	+232	+151	+136						
16		-110	+151	+127	+174	+116	+290	+625	+637	-371	- 23	-116	0	- 64	+174	+122	+ 75	- 12	+ 12	+ 58	+ 98	+ 58	+ 52	+116	+ 94							
17	X	+ 58	+122	+116	+162	+110	+232	+405	+492	+400	- 64	-405	-544	-411	-145	+ 69	+104	+347	+278	+226	+197	+203	+156	+104	+ 81	+ 96						
18	X	+ 69	+116	+145	+151	+174	+237	+556	+782	+533	-116	-718	-753	-423	0	+ 41	+255	+226	+220	+197	+174	+122	+162	+ 58	+179	+ 99						
19		+110	+ 58	+116	+119	+208	+278	+475	+544	+232	-145	-237	-434	-278	..	..	..	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25		+122	+174	+243	+232	+232	+353	+313	+457	+278	+550	+127	-266	..	..	+874	+307	+133	+104	+104	+290	+156	+266	+203	+579	..				
26		+174	+185	+174	+174	+179	+232	+405	+521	+237	-122	+2490	+179	-689	-185	+498	+475	+515	+660	+961	+1193	-185	0	- 69	-452	+315						
27		+353	-145	-145	- 75	+284	+162	+423	+405	+151	+104	+174	+197	+145	+336	+139	+805	+ 87	+579	- 81	+203	+255	+411	+423	-278	+205						
28		+452	+296	-179	-779	+179	+382	+ 58	+ 35	+116	+405	+ 87	..	..	..	..	..	0	- 12	+359	- 58	+ 58	+139	+194	-145	..	
29	X	+278	+ 58	+104	+301	0	+261	+457	+440	+122	+162	- 64	- 87	+ 69	+469	+301	+521	+313	+104	+214	+ 69	+116	+ 58	+ 64	+220	+190						
30	X	+162	+208	+232	+232	+220	+156	+423	+452	+365	+116	- 23	-243	+ 23	+753	+347	+284	+290	+822	+208	+122	+336	0	- 58	-232	+216						
MEANS		+100	+110	+148	+ 83	+153	+274	+431	+605	+290	+ 5	- 43	-186	-244	+ 4	+147	+264	+271	+236	+172	+185	+116	+124	+ 81	+ 68	+140						
ALL DAYS																																
MEANS		+122	+116	+188	+197	+136	+235	+461	+554	+258	- 73	-273	-293	-187	+110	+194	+295	+254	+157	+ 96	+112	+165	+ 56	+ 55	+109	+127						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD LINE ON LENGTH IN KMS 93.9 DIRECTION E 0° 5' N

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 86	+239	+257	+269	-282	+496	+337	+863	+129	+673	+545	+294	- 49	-306	-435	-306	-122	+ 61	- 31	- 92	- 61	0	+129	+102	
2		- 73	+233	+ 86	-318	+373	..	..	..	..	+226	+ 73	+141	-422	-343	-184	-349	+233	+673	+ 92	-306	-171	+ 55	+539	+410	..
3		-239	-190	- 24	- 49	0	+251	+490	+386	+490	+783	+116	-312	- 98	+ 61	- 67	-208	- 67	+ 61	+ 24	-190	-337	+116	-245	-184	+ 24
4		- 73	-202	+263	-379	+330	+122	+269	+477	+581	+416	+ 31	-135	-275	- 49	+ 31	-306	+122	-135	+ 61	+177	-245	+116	0	-116	+ 45
5	X	-159	-239	+184	- 12	- 43	+ 61	+110	+459	+428	- 49	-141	0	- 49	-122	-318	-129	-110	0	+135	+177	- 86	- 61	-214	+214	+ 2
6		+306	+147	+ 61	- 67	-129	+ 61	+ 61	+251	+257	+251	+147	+ 86	- 24	-122	- 61	-324	-135	+386	+514	+230	+282	+300	+196	+184	+119
7		-306	- 67	-196	-808	+ 37	+226	-129	+ 37	+330	0	+ 61	- 67	+ 18	- 67	+367	-312	+257	-196	-428	-214	+ 80	+ 61	- 73	-116	- 63
8		-171	-269	- 67	+ 86	-245	- 61	-275	+435	+318	- 61	-196	-184	+ 24	+196	+116	+ 74	0	+392	+251	-190	-184	-129	-153	-171	- 19
9	X	- 67	-330	- 24	+177	-184	+ 43	+ 98	+263	+392	+226	+ 55	-159	-282	-190	+110	+294	+ 49	-177	-282	-196	-245	-294	-116	- 61	- 38
10	X	-153	- 86	- 67	- 67	- 73	- 18	+196	+361	+184	+ 24	-196	-386	-373	-245	- 67	0	- 37	-129	-141	-129	-122	- 73	- 80	- 80	- 74
11	X	- 92	- 67	- 98	- 12	- 24	- 55	+116	+147	-110	-349	-337	-306	-190	+ 86	+190	+220	+180	-122	-202	- 73	0	- 80	- 49	+122	- 46
12	X	+135	0	+202	0	0	+129	+416	+428	+349	+ 92	-129	-226	-184	-110	- 43	- 12	- 55	- 61	-129	-116	- 49	0	0	0	- 27
13	X	0	+ 67	+110	+ 86	+171	+ 49	+183	+343	+190	+ 61	+ 18	0	- 61	- 61	+ 18	+ 49	0	0	+ 86	+129	+282	-141	-190	0	+ 58
14		0	-110	- 49	- 37	0	+190	+337	+581	+588	+239	+ 98	+796	-900	-569	-153	+502	+416	- 55	0	+ 80	+ 55	+214	+ 37	+184	+102
15		+ 67	-171	+147	+ 37	0	- 49	+226	+245	+190	+110	0	- 61	-300	-214	-122	- 80	- 61	+ 12	0	- 49	+ 61	+257	+ 49	+ 31	+ 14
16		-263	0	- 49	- 49	-141	+ 61	+269	+820	-196	+110	+159	+312	- 55	+ 24	-129	-269	-355	-184	- 61	- 67	- 67	- 73	-110	-104	- 17
17	X	-110	- 61	- 73	0	- 67	+ 12	+177	+294	+318	- 49	-116	-300	-300	-122	- 67	-190	+110	+184	+208	+177	+184	+171	+122	+147	+ 27
18	X	+110	+ 86	+233	+184	+196	+190	+349	+661	+557	+135	-343	-477	-245	+ 73	- 92	0	+ 61	+171	+196	+171	+122	+190	+165	+306	+125
19		+177	+ 92	+147	+184	+245	+257	+318	+447	+257	+ 67	+122	-129	- 92	- 37	- 73	-129	- 67	- 61	+ 86	0	+ 61	+171	+ 92	- 24	+ 88
20		-147	+196	-104	+147	+245	+110	+269	+789	+661	-110	+122	+ 98	+251	+330	+ 61	-147	-294	-220	+ 67	+ 12	- 61	+ 98	+ 18	- 67	+ 97
21		+ 73	+122	-122	+ 61	+594	-330	+428	+190	+477	+624	+416	+ 24	-190	-251	-129	-122	+ 80	+184	+147	+ 61	+ 24	0	0	+ 31	+100
22		0	+122	-129	- 49	+165	+177	+245	+447	+ 61	+171	+ 61	-196	-220	-343	-184	- 61	- 37	+ 73	+ 31	0	0	- 12	0	0	+ 14
23		- 55	- 37	- 18	- 37	+ 43	+122	+110	+226	+251	+202	+141	- 61	-184	-190	-171	-110	-165	+ 80	- 49	+ 61	0	+171	0	- 12	+ 13
24		+ 24	+ 31	+ 61	+ 61	0	+ 67	+116	+245	+239	0	- 80	-116	-129	-147	-122	+ 86	- 31	+ 37	+ 67	+202	+ 67	+122	- 92	+496	+ 50
25		-141	- 49	- 24	- 24	+ 24	+ 61	+ 98	+263	+312	+545	+282	-306	-294	-141	+416	+165	-147	-184	- 55	+ 12	+ 12	+ 18	+ 24	+ 49	+ 38
26		- 61	0	- 73	+ 12	0	+ 12	+ 92	+226	+324	0	+3005	+239	-459	+1175	+257	+379	+575	+630	+979	+490	-630	+171	-251	-435	+179
27		+171	-416	-330	-110	- 49	0	+269	+294	+135	+141	+ 61	-196	-153	+ 61	0	+722	+ 73	+ 92	+ 31	+ 73	+208	+ 73	+367	-300	+ 51
28		+ 73	+ 6	-184	-606	-147	+ 67	+196	- 49	+129	+490	+129	-404	-135	+190	+129	+220	-355	-196	+208	-251	-184	-110	- 86	-282	- 48
29	X	+ 80	-153	-147	0	-110	0	+263	+343	+245	+245	+ 37	-104	- 12	+116	- 73	- 61	+110	+ 61	+110	-122	- 24	- 80	- 80	+110	+ 31
30	X	+ 61	+122	+171	+184	+196	+159	+373	+477	+441	+245	+220	+135	- 67	+337	-306	-135	+ 92	+777	-122	+233	+110	- 31	+ 61	-379	+140
MEANS ALL DAYS		- 29	- 42	+ 2	- 28	+ 26	+ 83	+207	+374	+294	+180	+148	- 74	-173	-103	- 32	- 7	+ 3	+ 51	+ 59	+ 20	- 26	+ 38	- 21	- 11	+ 39
MEANS 10 DAYS		- 20	- 66	+ 49	+ 54	+ 6	+ 57	+228	+378	+294	+ 56	- 93	-182	-176	- 24	- 65	+ 4	+ 40	+ 70	- 14	+ 25	+ 17	- 40	- 38	+ 38	+ 25

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 265

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		NORTHERLY					LINE					OM					58.4					58.4					58.4					
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+305	+408	-755	+449	+576	+230	+392	-230	+230	-449	+1233	+230	+812	+202	+518	+530	+369	+236	+121	+184	+58	+121	+75	-161	+237						
2		+300	+144	+69	+294	-276	+461	+161	+294	+484	+259	-58	-46	+58	+369	+467	+369	+259	+115	+115	+259	+449	+334	+156	+58	+212						
3		+179	+276	-58	+276	+179	-58	+230	+323	+58	+207	-150	+167	-311	+81	+553	+426	+288	+317	+415	+732	-288	+253	-144	-179	+157						
4		-17	+52	+63	+58	+63	+190	+225	+461	+467	+242	0	-219	-173	-29	+98	+225	+276	+311	+357	+179	+680	+115	+144	-81	+154						
5	X	+29	-46	-52	-29	+75	+179	+167	+150	+288	+75	+35	-63	-150	-46	+161	+138	+104	+58	+236	+288	+115	+115	+127	+196	+90						
6		+179	+265	0	+173	0	+115	-265	+593	+420	+311	+219	+104	+173	+115	+634	+461	+467	+576	+132	+230	+409	+576	+605	+576	+294						
7		-173	+1227	-196	-559	-334	-933	+415	+196	-115	-121	+288	+242	+634	+599	+213	+455	+346	+444	+288	+541	+346	-265	+432	+490	+186						
8		+426	+397	-40	-259	-115	-202	+63	+29	-317	-29	-81	-63	+121	-242	+265	+351	+513	-23	+63	+179	+104	+196	+167	+225	+72						
9	X	+161	+115	+29	+167	+173	+150	+363	+323	+52	-115	-225	-196	-46	+161	+230	+58	+92	+92	+161	+167	+161	+167	+179	+173	+108						
10	X	+115	+46	+202	+184	-115	+92	+628	+576	+294	-58	-225	-253	-17	+92	+236	+138	+230	+86	+184	+115	+282	-58	-144	+259	+120						
11	X	+167	0	+184	+58	-213	+288	+403	+288	+121	-12	0	-46	+115	+190	+173	0	+115	-40	+230	+150	+115	+98	+35	+98	+105						
12	X	+75	+115	+115	+179	+265	+173	+444	+674	+432	+92	-253	-253	-184	-167	+179	+253	-23	+202	+207	+161	+58	+58	+58	+104	+124						
13	X	+115	+138	+75	+167	+115	+230	+346	+426	+230	-127	-104	-138	-161	+92	+173	+230	+121	+69	+138	+115	+115	+58	+109	+58	+108						
14		+86	+115	+121	+179	+173	+207	+588	+697	+409	-69	-248	0	+138	+121	+207	+115	-12	-58	+115	+115	+58	+179	+530	-92	+153						
15		+115	+253	-956	+714	+392	+449	+369	+639	+334	+115	0	-230	-282	-317	+179	+121	+225	+276	+173	+127	+81	+58	+121	+276	+135						
16		+207	-472	+380	+127	+81	+144	+346	+346	+530	0	-46	+58	-92	+35	-86	+115	+63	+92	+92	+104	+225	+115	+86	+81	+105						
17		+46	+115	+56	+104	+127	+161	+276	+490	+553	-58	-271	-294	-69	+230	+17	+403	+127	+173	+253	+63	+161	+104	+121	+576	+146						
18		-173	+518	+121	+52	0	+213	+415	+317	+300	-179	-156	-300	-58	-225	+328	+570	+58	+340	+173	+236	+760	+58	+207	+167	+156						
19		+58	+265	+271	+58	0	-29	+276	+714	+403	-52	-276	-17	+288	+98	+403	+202	+386	+109	+328	+374	+282	+81	+121	+63	+184						
20		+104	+121	+173	+138	+109	+219	+346	+420	+230	+58	+63	-115	+144	0	+121	+380	+478	+236	+179	+359	+207	+294	+288	+230	+195						
21		+173	+230	+173	+115	-144	+251	+288	+403	+720	-63	+29	-104	-196	+202	+311	+196	+121	+115	+225	+334	+58	+363	+380	-432	+160						
22		+576	-668	+121	+92	-472	+294	+605	+415	+294	+115	+92	+98	-132	-121	+29	+121	+213	+156	+161	+179	+173	+138	+138	+156	+116						
23	X	+58	+69	+63	+98	+121	+161	+328	+455	+219	-63	-109	-121	-69	-86	+58	+127	+104	+115	+167	+161	+161	+132	+132	+138	+101						
24	X	+115	+81	+109	+104	+121	+150	+357	+576	+513	+190	-121	-173	-276	-104	0	+63	+58	+69	+92	+115	+104	+63	+115	+69	+100						
25		+58	+58	+121	+58	+144	-17	+415	+461	+156	-75	-755	-438	-420	-899	+346	+726	-173	+167	+127	-29	+311	-92	+35	+58	+14						
26		-363	-449	+259	-58	-219	-317	+484	-599	+639	+864	+806	+420	+409	+783	+973	-81	-127	-132	+467	+115	-17	+161	-259	-887	+120						
27		+46	-23	-63	-317	-455	-265	+513	-230	+478	-138	+58	+46	+282	+219	-58	+173	-150	-109	+35	+184	-230	-524	+86	+236	-9						
28		+167	+69	+207	+179	+403	+173	+288	+202	+173	-23	+253	+346	+265	+703	-81	+23	-219	-69	+58	+271	+697	+58	-179	-46	+163						
29	X	-138	+121	0	-104	-219	0	-46	+230	+230	+294	+265	0	-253	-357	-253	-69	+58	+69	+104	+288	-12	-35	+121	+58	+15						
30	X	+46	-17	-69	-12	-161	-58	-29	+156	+294	+282	+242	0	-294	-179	-173	-46	+219	+259	+46	0	+248	+138	-58	+109	+39						
31		+92	-81	-380	+46	+63	+144	0	+374	+576	+196	+346	-121	-305	-346	-104	-271	0	+58	+173	0	-12	-190	+403	+46	+29						
MEANS ALL DAYS		+101	+11	+12	+88	+15	+93	+303	+328	+313	+54	+27	-48	-2	+37	+197	+210	+148	+139	+181	+200	+189	+95	+135	+85	+125						
MEANS 10 DAYS		+74	+62	+66	+81	+16	+136	+296	+385	+267	+56	-50	-124	-134	-40	+78	+89	+108	+98	+156	+156	+135	+74	+67	+126	+91						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1940

OCTOBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		+184	+251	-380	+123	+215	+196	+288	-129	+552	+729	+1048	+466	+987	-582	+49	+49	+86	+61	-67	-12	-61	+31	0	-582	+146
2		-306	-55	-67	0	-380	+245	-49	+190	+227	+613	+61	+116	-61	+61	+129	-25	0	-110	-67	+123	+368	+282	+147	-37	+59
3		-166	-221	-215	+67	-123	-196	+31	+129	+123	+227	+12	+380	-521	-294	0	+239	+31	+178	+294	+306	-239	+147	-147	-356	-13
4		-172	-104	-74	-61	-25	+135	+166	+245	+282	+184	+67	-135	-86	-55	0	+67	+123	+190	+166	-18	+123	+233	+92	-116	+51
5	X	-67	-196	-159	-166	-31	0	+98	+129	+172	-31	-61	-31	-147	-61	-61	-74	-74	-67	-49	0	-80	-31	0	+98	-37
6		-123	+153	+37	-80	+172	+184	+190	+306	+392	+644	-55	0	+86	0	+601	+172	+398	+674	-215	+123	+343	+368	+282	+460	+213
7		-674	+693	-98	-644	-331	-938	+460	+417	-104	+129	+582	+490	+521	+527	-67	+61	+196	+564	+447	+368	+313	-736	+417	-18	+107
8		-86	-31	-190	-368	-178	-306	-123	0	-98	0	+49	-300	0	-282	0	+196	+313	-257	-331	-159	-116	+61	-31	+61	-91
9	X	-55	-61	-74	-129	-61	-67	+86	+98	-31	-178	-184	-221	-61	+55	+61	-49	-104	-172	-61	-61	-37	0	+37	-98	-57
10	X	0	-129	-18	+61	-153	-92	+441	+423	+190	+172	+49	0	-55	+61	+257	0	+190	0	-135	-172	0	-147	-221	+61	+33
11	X	+18	-178	-61	-141	-300	0	+184	0	0	-18	+98	0	+104	+196	+141	-86	+55	-43	+55	+25	+141	0	-12	0	+7
12	X	-55	+61	+98	+43	+245	+25	+313	+441	+417	+184	+25	0	+55	-92	+257	+74	+61	+221	+227	+61	+49	+135	+178	+245	+136
13	X	+196	+251	+104	+233	+196	+282	+362	+325	+233	+67	+123	+67	+74	+129	+74	+98	+110	+86	+74	+61	+49	+18	+49	0	+136
14		+37	+123	+116	+184	+172	+178	+494	+466	+411	+239	-61	-123	+49	+135	+184	0	-178	-251	-49	0	-49	+178	+159	-18	+99
15		+123	+184	-588	+270	+159	+374	+61	+380	+245	+208	+233	+116	-110	-306	+215	-55	+74	+116	0	0	0	-49	+18	+147	+76
16		+190	-521	+147	+25	+37	-49	+184	+288	+429	+67	-12	+331	+61	-92	-257	0	-166	-184	-116	-92	+61	0	-31	-61	+10
17		-61	-37	-49	-61	-43	-37	+67	+221	+276	-49	-184	-147	+37	-135	-153	+306	+221	+61	0	-129	-49	-31	-37	+693	+28
18		-67	+116	-49	-135	-251	0	+110	+129	+123	0	+86	-67	+25	+92	+153	+331	-172	+196	-61	+18	+454	-153	+110	+6	+41
19		-319	-37	+282	0	-61	+55	+25	+251	+264	+110	-147	-184	-147	-135	-98	-98	+74	+25	+147	+92	+123	-221	+49	-239	-8
20		+61	+12	+92	-25	-67	0	+92	+196	+123	+49	-31	-208	-110	-184	-98	+116	+245	-245	-123	+61	-49	+147	+98	+67	+9
21		-141	+123	-80	-159	-172	+239	+98	+153	+349	+110	+123	-67	+110	+282	-74	+190	-184	-221	+61	-61	-129	+227	+166	-466	+20
22		+264	+61	-67	-104	-368	+129	+313	+25	+80	+129	+208	+276	0	-166	-116	-31	0	-49	-61	0	37	0	0	+49	+25
23	X	-61	-61	-104	-61	-37	-43	+147	+172	+74	-61	0	0	0	-49	-61	-135	-172	-74	-67	0	0	-12	0	0	-25
24	X	-12	-67	-55	-67	-61	-31	+98	+227	+245	+116	+12	0	-166	-166	-166	-184	-129	-110	-104	-49	-49	-43	-61	-55	-37
25		-67	-135	-110	-104	+74	-74	0	+25	+55	-245	-166	-239	-202	-141	-104	+343	+116	+141	+159	+116	+172	+61	+74	+110	-6
26		-55	-80	+129	+116	+110	-61	+349	-662	+313	-74	+306	+184	+129	+546	+454	+172	+55	+116	+239	+172	+80	+190	-86	-374	+94
27		+74	+37	+55	-135	-245	+110	+349	+86	+202	-31	0	-49	+116	+129	+12	+129	+49	+245	+184	+55	+25	-67	-98	+123	+56
28		+49	-67	+31	+92	+178	+61	+49	+178	+49	-12	-49	+61	+55	+178	+67	+116	-49	+61	+74	+116	+417	-61	-67	0	+64
29	X	0	+123	+67	+12	-37	+86	+172	+184	+116	+86	0	-116	-147	-123	+25	+110	+129	+110	+74	+221	-49	+55	+61	0	+48
30	X	+55	+74	+18	+74	0	+86	+67	+239	+245	+129	0	-129	-178	-49	0	+123	+129	+221	+116	+98	+104	+123	+67	+116	+72
31		+61	-61	-43	+178	+135	+147	+184	+294	+257	0	+49	-147	-196	-123	+67	+61	+129	+104	+123	+80	+92	-37	+178	+92	+68
MEANS		-38	+7	-42	-31	-40	+20	+171	+175	+200	+113	+70	+10	+7	-21	+48	+71	+50	+51	+30	+40	+66	+22	+45	-3	+43
ALL DAYS																										
MEANS		+2	-18	-18	-14	-24	+25	+197	+224	+166	+47	+6	-43	-52	-10	+53	-12	+20	+17	+13	+18	+3	+10	+10	+37	+28
0 DAYS																										

**** = 10 LEAST DISTURBED DAYS**

TABLE 267

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		NORTHERLY										LINE ON										58.4										
1		+601	+295	-179	-532	-64	+277	+87	+162	+324	+624	+393	-64	-468	-399	-231	-179	-116	-127	+202	+243	+277	0	-17	-341	+43						
2		+168	+688	-58	-393	-549	+69	+162	+410	+445	+399	+277	+29	-289	-434	-468	-162	+46	+162	+69	+69	+399	+173	+277	-168	+55						
3	X	0	-69	+173	-959	-231	+110	-168	-46	0	+162	+410	+225	0	0	-29	+40	+98	+162	+81	+283	+162	+283	-87	+289	+37						
4		-497	-237	-399	-399	-295	-289	-624	+428	+220	+694	+624	+324	+266	+983	+133	+144	+399	-156	-358	-81	+867	-168	-231	-561	+21						
5	X	-665	+168	-87	-260	-457	-197	-116	-52	+168	+173	+168	+91	-87	+58	-295	-162	-64	+58	+144	+64	+462	+208	+289	-92	-21						
6	X	-104	-46	-295	+46	+64	+87	+220	+121	+312	+289	+202	+29	+29	-231	-46	-64	-23	-64	+69	+116	+422	+358	+277	+23	+75						
7		-295	+376	-347	-29	-405	-237	-58	+231	+457	+434	+601	+670	+324	+179	+214	0	+139	+353	+578	+601	+566	+676	+740	+532	..						
8		+451	+295	+243	+405	+347	+179	+358	+405	+405	+480	+462	+353	+214	+168	+98	+92	+168	+168	+283	+451	+399	+786	+694	+717	..						
9		+173	+474	+6	+462	+335	+318	+104	+376	+584	-82	+260	+277	+399	+416	+486	+237	-104	-64	+58	+173	+156	+116	+104	+69	..						
10	X	0	-69	-58	-121	+69	+185	+162	+168	+173	+162	+121	+173	0	-58	-104	-162	-98	+104	+220	+144	+58	+173	+110	+29	+58						
11	X	-139	-69	+58	0	+58	+104	+168	+283	+237	+266	+260	-64	-225	-179	+69	+220	+399	+225	-116	+58	0	0	+23	-46	+66						
12		-179	-64	+173	+462	+58	+191	+144	+295	-64	-208	+208	-121	-121	+798	+405	+757	+590	+1312	+1075	+1381	+694	+1023	+1445	+58	+461						
13		-179	-642	-578	-289	-763	-497	-58	-312	-480	-462	-491	-306	-81	-191	+254	+185	+116	+301	+439	+92	0	0	+474	+434	-168						
14		-173	-46	-295	-231	+185	+87	+52	+116	+185	+289	+208	-202	-179	-69	+705	+58	-399	-156	0	+341	-197	+243	-283	-185	+2						
15		-358	+58	-87	-98	+58	-75	0	-12	+353	+578	+139	-231	-642	+289	+29	-376	+46	+341	-376	-58	+58	+410	-35	+58	+13						
16		-46	-121	-139	-58	-283	+64	-202	-156	+439	+815	+185	-116	+144	-98	+757	-289	-64	-197	-168	-52	+12	-64	-23	-69	+11						
17		-75	-110	-104	-116	-139	0	+173	+318	-260	-347	-353	-353	+168	-202	+324	+601	-208	-565	+1328	+525	+3885	-585	-416	+863	..						
18		-842	-634	+159	+207	-218	-307	-297	-198	-208	-486	-277	-168	-842	-644	-396	-704	-624	-654	-416	-426	-168	-396	+1833	-832	..						
19		+1056	0	-872	-317	-327	-396	-377	-436	-486	-496	-793	+1001	+585	-624	-813	-674	-684	-575	-486	-575	-535	-515	-614	-753	..						
20		-882	-793	-773	-203	-773	-803	-94	-664	-823	-723	-902	-991	-941	-981	-892	-882	-193	-694	-634	-674	-684	-505	-605	-466	..						
21		-466	0	-605	-198	-597	-575	-624	-614	-535	-892	-1288	-1407	-1278	-1189	+1041	-793	-694	-714	-684	-704	-674	-714	-723	-694	..						
22		-882	-605	-743	-922	-783	-674	-595	-585	-813	-1199	-1268	-1189	-1090	-1001	-892	-704	-577	+29	+272	+347	+295	-58	+336	+596	..						
23		-1158	-405	+382	+307	-272	-81	-174	+295	+174	+197	+93	-58	-156	-174	-110	-81	0	+58	0	+93	+75	+122	-58	-243	-49						
24	X	+174	+58	+69	+29	+58	+98	0	+174	+237	+116	+58	-179	-81	-127	+75	+58	-46	+208	+237	+116	+104	0	+104	+58	+67						
25		+58	+232	-578	+578	+58	-122	-562	-1598	+1309	+1222	+822	+822	+411	+342	+278	+64	+371	0	+232	+782	-122	+388	-440	-6	+87						
26	X	-208	-106	+834	+174	+185	0	0	+122	+313	+272	+29	-208	-122	+116	-87	-58	0	+174	+400	+46	-58	+58	+64	+58	+42						
27	X	+87	-104	+156	-23	+58	0	-498	+446	+243	+376	+92	+29	-64	-220	-29	-58	+75	+162	+226	+220	+162	+116	+46	0	+62						
28	X	-46	-12	+69	-23	+58	-87	+226	+254	+185	+226	-23	-133	-162	-185	-203	-87	+226	+336	+255	+52	+156	+608	+139	+174	+84						
29		-116	-168	+87	+133	+116	-156	-324	-510	+643	+683	+139	-46	+342	-46	+405	+527	-116	+69	+457	+92	-179	+127	-75	-104	+82						
30	X	-249	-179	-596	+452	+122	+290	+104	+98	0	+220	+52	+29	-46	-35	+29	+98	+208	+162	+232	+278	+139	+162	-17	-64	+62						
MEANS ALL DAYS		-192	-88	-64	-57	-56	-4	-64	+26	+275	+228	+169	+16	-73	+7	+73	+9	+78	+161	+158	+204	+166	+201	+94	-33	+51						
MEANS 10 DAYS		-115	-143	+32	-68	-2	+59	+10	+157	+187	+226	+137	-2	-76	-86	-62	-18	+78	+153	+175	+138	+161	+97	+95	+43	+53						

★ = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										DIRECTION E 0° S N										MEAN				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20		20-21	21-22	22-23	23-24
1		+246	+105	+18	-185	+123	+209	+111	+259	+277	+148	0	-209	-283	-111	+123	+154	+172	+166	+154	+185	+271	0	+62	-49	+81
2		+129	+296	-62	-68	-234	+148	+240	+333	+302	+117	+18	-74	-185	-148	-111	+123	+129	+185	+154	+253	+172	+49	+277	-123	+80
3	X	+68	+43	+129	-616	+259	+185	+129	+154	+74	-31	-62	-105	-68	+55	+86	+197	+191	+240	+142	+240	+179	+129	+333	+62	+84
4		-185	-49	-129	-68	-12	-92	-271	+376	+117	+290	+62	+142	+80	+333	+68	+117	+123	+203	+49	+148	+561	0	-49	-62	+73
5	X	-394	+228	0	-25	-296	+68	+86	+234	+185	+80	-55	-55	-68	+12	-25	+62	+111	+136	+191	+216	+172	+86	+185	0	+47
6	X	-49	-105	-111	+62	+62	+111	+62	+172	+216	+117	0	-111	-117	-68	+99	+117	+74	+62	+123	+74	+179	+154	+148	+55	+55
7		+111	+74	-62	+99	-357	+74	+197	+142	+123	+37	+68	+55	0	+55	+99	+37	+37	+129	+166	+111	+68	+123	+148	+62	..
8		+62	-37	-31	+68	-49	0	+68	+123	+123	0	-18	-55	-68	-31	0	+55	+62	+68	+123	+172	+105	+203	+407	+129	..
9		0	+111	-203	+259	+80	+209	-290	+209	+129	-191	-62	-12	+99	+154	+185	+99	0	0	+62	+62	+62	+37	+62	+62	..
10	X	0	0	+31	+68	+80	+111	+123	+136	+172	+62	-25	-68	-92	-18	+12	+37	+55	+80	+123	+117	+37	+49	+62	0	+48
11	X	0	+12	+68	+55	+68	+74	+142	+197	+129	+18	-62	-129	-99	0	+86	+123	+172	+129	+49	+99	+55	+12	+25	0	+51
12		-55	+172	+142	+616	+111	+55	+43	+111	+259	-99	-283	-105	-105	+339	+111	+363	+68	+357	+579	+647	+136	+493	+745	+55	+198
13		-530	-80	-253	+43	-320	0	+222	-185	-191	-197	-333	-197	-99	-86	+228	+148	+111	+92	+216	0	+62	+55	+148	+148	-42
14		-25	+31	-99	-148	+185	+123	+49	+296	+123	+62	-111	-222	-136	-148	+271	+117	0	+55	+117	+259	-111	+117	-68	+166	+38
15		-296	+68	+37	+74	+117	+49	+154	+179	+290	+123	-68	-191	-382	+123	+62	-62	+129	+283	+62	+123	+74	+191	+49	+62	+52
16		+68	-37	+74	+117	-12	+123	+62	+172	+370	0	-160	-111	-99	-99	+333	-25	+179	+166	+111	+92	+117	+49	+55	0	+64
17		0	0	+49	+62	+62	+68	+129	+216	+68	-68	-253	-55	-172	+92	+277	+290	-101	-33	-40	+36	+87	+40	0	-36	..
18		-36	-683	+36	-58	+76	+174	+185	+366	+373	+362	+214	+36	-105	-159	-36	+33	-145	-69	+47	+69	+141	+181	+174	+109	..
19		+384	+192	-91	+94	+145	+145	+7	-112	+76	+83	+174	+101	-22	+98	-123	+72	+76	+43	+148	+101	+106	+76	+76	0	..
20		-76	+91	+76	+36	+80	+29	+203	+181	-72	+250	+264	+322	+261	+228	+174	-177	+706	+119	+297	-192	-62	-141	-195	+250	..
21		-72	+901	+152	+699	-43	+214	+185	+80	+36	+221	+188	+87	-109	+51	+152	+192	+500	+195	+253	+163	+72	+188	+536	+311	..
22		-337	+257	-167	-1064	-145	+424	+224	+145	..	..	..	..	..	..	..	..	..	-31	+313	+282	+614	-61	+166	+1009	..
23		-565	-424	+368	+356	+141	+233	-80	+190	+246	+319	+295	+209	+117	0	-190	-178	-55	-111	-61	+61	+111	+123	-135	-221	+31
24	X	+160	0	-49	-61	+49	+123	+74	+111	+227	+258	+239	+49	+68	-49	+129	-141	-233	+43	+178	+61	-31	-61	+92	+123	+57
25		+111	+313	-497	+399	-221	+178	0	-675	+921	-196	+528	+1044	+540	+393	+344	+166	+411	-307	+196	+620	-86	+49	-332	+160	+169
26	X	+68	-737	+528	+129	-43	0	+68	-184	+190	+362	+31	-190	+61	+196	-123	-129	-129	+172	+307	+74	-68	+117	+86	+61	+35
27	X	+86	-111	+123	-37	-61	+123	-411	+215	+74	+467	+301	+368	+147	-215	-246	-295	-117	-61	+111	+178	+178	+166	+61	-25	+42
28	X	-80	-55	+43	-68	-61	+25	+215	+246	+233	+239	+184	-117	-61	-172	-166	-233	+68	+74	+178	-92	+319	+503	-49	+467	+66
29		-86	-571	+338	+31	+117	+246	-35	-313	+399	+958	+528	-68	+197	-98	+614	+307	-252	-270	+221	-123	-190	+307	+74	+49	+112
30	X	-123	-61	-393	+344	+61	+356	+205	+246	+246	+295	+221	+319	+252	+74	+80	+61	+129	0	+123	+301	+129	+307	+123	+55	+143
MEANS ALL DAYS		-69	-46	+15	+48	+8	+117	+61	+153	+231	+163	+59	+9	-2	+15	+35	+49	+64	+81	+156	+168	+108	+138	+90	+47	+71
MEANS 10 DAYS		-26	-79	+37	-15	+12	+118	+78	+153	+175	+187	+77	-4	+2	-18	-7	-20	+32	+88	+147	+127	+115	+146	+107	+90	+63

* = 10 LEAST DISTURBED DAYS

TABLE 269

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT					LINE ON					LENGTH IN KMS					DIRECTION N 17° 8' E					MEAN				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20		20-21	21-22	22-23	23-24
1		-168	-145	+226	-232	-122	+172	+151	-53	+235	+278	+208	+226	-295	-46	+174	+53	+179	+475	+295	+220	+290	-179	-46	-168	+75
2		0	-53	-110	-770	+365	+6	+162	+255	+318	+145	+64	+122	-168	-139	+122	+347	-220	+29	+220	+81	-17	+185	0	-75	+36
3		-69	-58	+12	-417	+87	+87	-110	+69	+249	+469	+417	+127	+41	+46	+81	-226	-104	+58	+145	+261	+197	+12	+104	-237	+52
4	X	+17	+104	-342	-52	+93	-272	+58	+58	+151	+342	+226	+174	-104	-46	-58	-58	+52	+203	+116	+179	+261	+272	+139	-52	+61
5	X	-46	-52	-93	-93	0	0	+69	+58	+255	+347	+272	-162	-174	-58	-104	+110	+64	+104	+185	+168	+179	+93	+12	+58	+50
6	X	-46	+58	-93	+179	+98	0	0	+156	+220	+394	+234	+58	-69	-46	-179	-141	-75	+58	+220	+104	+58	+64	+29	0	+55
7	X	-52	0	-64	-75	+35	-35	+81	+93	+191	+237	+168	0	0	-63	-69	-46	-58	+46	+46	+58	+52	+46	+17	0	+25
8	X	+35	+29	0	+46	+52	+93	+58	+58	+168	+220	+110	0	-46	+52	+64	+17	-23	+58	+58	-52	+104	+185	+232	+747	+94
9		+232	+116	-179	-93	-104	-423	-394	-58	-13	+139	+203	+290	+168	+104	-69	-122	-52	+185	0	+116	+116	-58	+232	+110	+18
10		+69	+29	+127	-6	-162	0	-69	-174	-52	+197	+382	+3	+185	+37	+58	+58	+197	+46	+122	+162	+174	+162	+81	+23	+43
11	X	+174	-69	+179	+58	+69	+53	+46	+69	+122	+226	+174	-226	+23	-156	+214	-174	-151	+208	+29	-58	0	+93	+133	+81	+47
12	X	+116	+230	-139	+58	-58	-58	-243	+93	-93	+116	+174	+133	+93	-168	-64	+104	-104	+237	0	+168	+133	-58	+46	0	+37
13		-29	+81	-602	+301	+104	-52	-46	-104	+58	+29	-52	-162	-118	+185	+17	-69	+69	+174	+23	+93	+52	+122	+46	+52	+7
14		-69	+58	0	+64	-498	-220	+498	+162	+127	+197	-162	-64	-58	-110	+162	+104	+104	+203	+116	+162	+104	+58	+12	-35	+38
15		-58	-69	-58	-75	-46	+118	+52	-255	-58	+116	+324	+29	-220	-52	-255	+174	+521	-133	+156	+237	+185	+116	0	-168	+24
16		-52	+58	-235	+232	+174	+58	-174	+58	+179	+116	+179	-46	-122	-179	-75	-69	0	+122	+81	+81	+46	0	-17	+15	
17	X	-58	-29	-58	+93	-87	-174	-232	+87	+220	+313	+98	-220	-156	-290	-122	-98	+93	+230	+336	+168	-41	+64	-93	-81	+1
18	X	-35	0	0	-220	+58	+17	+81	+151	+284	+278	+122	-156	-347	-249	-110	-58	0	+151	+145	+75	+139	+122	+69	+116	+26
19	X	+122	+17	+174	+174	-12	+64	+122	+58	+185	+226	+185	-104	-208	-307	-104	+29	+174	+324	+220	+162	+179	+290	+197	+230	+102
20		-174	-93	+81	-695	+550	+353	-313	+851	+1042	+1019	+840	+417	-104	+191	+770	-521	+133	+290	+35	+635	+463	+874	-139	-724	+243
21		-544	-218	-133	+261	-400	-104	+266	+69	+243	+654	+405	+376	+243	-87	-562	-226	+98	+122	+498	+69	+98	-58	-81	0	+37
22		-376	+174	-411	-139	-127	-434	-122	+174	+307	+133	+342	+203	+139	-17	-162	-110	+69	+342	-64	-68	+69	+116	0	+52	+4
23		-41	-29	0	+64	-174	-353	-75	-226	-203	-203	+428	+342	+365	-41	0	+58	-35	+116	+127	+58	+69	0	-23	-46	+7
24		+52	-203	-23	+58	-52	-162	-122	-29	+168	-220	+243	+46	+23	+145	-191	-139	-64	+98	+110	+185	0	0	+162	+179	+29
25		-521	+347	+116	-428	-64	-145	-87	+58	+110	+139	+235	+272	0	-75	+139	-145	-23	+81	+116	+145	+272	-347	+116	-46	+14
26		-58	-69	-625	+492	-58	-69	+46	+41	+110	+179	+139	+122	+58	-23	-174	-162	+75	+122	+52	+118	+220	-58	-58	-52	+15
27		-116	+46	-156	-208	-133	-353	-203	0	+110	+98	+197	+156	+81	+58	+122	+58	-58	+151	+116	+197	0	-64	-179	-104	-8
28		-46	-424	+139	+139	0	-122	-179	+29	+122	+266	+203	-64	-278	-156	+203	+237	+880	+191	+151	+116	+145	+81	+156	-174	+67
29		-272	-168	-116	-353	-69	+110	-17	-156	+69	-133	+330	+139	-139	+116	+35	+118	-145	+116	+214	+116	+237	+405	-272	+151	+13
30		-1100	+973	+423	0	-405	-237	-12	+145	+179	+255	-290	+290	-475	-226	-400	-486	+98	+232	+158	+64	-98	+290	+29	+168	+10
31		-481	-52	-185	-226	-417	0	+116	+151	+232	+371	-35	-232	0	+64	-58	-122	-116	0	+64	+127	+116	+58	-122	-162	-38
MEANS ALL DAYS		-116	+17	-71	-60	-38	-67	-19	+61	+170	+238	+184	+90	-53	-48	-19	-49	+51	+152	+164	+136	+123	+93	+26	-15	+39
MEANS 10 DAYS		+23	+35	-44	+17	+36	-31	+4	+88	+170	+270	+181	-50	-98	-124	-53	-32	-3	+168	+136	+97	+106	+117	+78	+116	+50

= 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1940

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1940

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-117	+ 86	+184	+123	+ 68	+196	+246	+141	+276	+295	+436	+639	-123	+135	+319	+ 49	+129	+381	+ 98	+516	+117	-135	- 43	-166	+160						
2		+ 61	+111	- 31	-577	+270	+ 37	+129	+258	+516	+ 98	+190	+332	+ 25	+123	+258	+596	-313	-184	0	+ 61	- 61	+258	+ 49	0	+ 92						
3		0	- 61	0	-393	+196	-239	-221	+178	+111	+252	+491	+239	+233	+221	+135	-362	-246	- 68	+ 55	+190	+ 68	+111	+111	-276	+ 30						
4	X	+172	+154	-190	- 61	+196	- 68	0	+135	+172	+418	+319	+418	0	+ 55	+ 37	- 61	0	+123	+ 12	+190	+111	+442	+246	0	+118						
5	X	+ 92	+ 92	0	+ 68	+ 68	+ 61	+184	+ 68	+172	+362	+454	+184	+ 61	+147	0	+141	0	- 18	+117	+252	+147	+ 61	0	+ 31	+116						
6	X	- 49	+ 37	- 68	+123	0	- 49	- 86	- 61	0	+252	+381	+264	+215	+227	-129	-184	-209	- 55	+129	+ 61	+ 61	+ 31	0	+ 40							
7	X	0	+ 68	+ 49	+ 74	+ 92	+ 86	+184	+123	+123	+184	+270	+252	+196	0	- 55	- 68	-123	- 68	- 49	0	0	0	+ 6	0	+ 56						
8	X	+ 18	0	- 55	0	+ 61	+ 55	0	- 74	0	+ 74	+184	+172	+123	+117	+ 61	- 55	-111	-117	-111	-184	+ 61	+172	+399	+749	+ 64						
9		+264	+ 61	- 68	-184	-111	-368	-546	- 61	-233	- 61	+233	+491	+356	+307	+239	+ 80	+123	+325	+135	+319	+307	+178	+632	+301	+113						
10		+307	+362	+356	+209	+147	+295	+221	+111	+184	+657	- 98	+424	+583	+344	+276	+166	+135	0	+160	+190	+307	+289	+166	+ 68	+244						
11	X	+252	0	+215	+ 68	+184	+117	+190	+246	+178	+252	+424	+184	+344	+172	+614	-172	- 61	+233	+ 49	- 12	0	+166	+246	+166	+169						
12	X	+252	+356	+ 31	+178	+135	+ 61	- 74	- 68	+246	- 55	+233	+430	+424	+135	+ 55	+ 98	- 55	+233	+178	+252	+ 55	- 49	+ 55	+ 86	+133						
13		0	0	-344	+196	+ 74	- 49	+ 61	+ 49	+ 55	+ 18	0	+147	+209	+424	+ 74	- 61	0	+160	- 49	+111	+ 68	+215	+117	+239	+ 71						
14		+ 61	+178	+307	+221	-172	+ 18	+602	+301	+166	+405	+645	+184	+111	+172	+276	+ 86	+ 61	+117	+ 55	+184	+111	+129	+ 61	+ 92	+182						
15		+ 61	+129	+160	+ 68	+ 68	+246	+123	+ 98	- 55	+ 74	+479	+362	+270	+154	-123	+295	+473	-467	+104	+141	+233	+301	0	- 68	+130						
16		+ 68	+215	-221	+301	+246	+172	+ 86	+ 49	+129	+154	+289	+258	+ 80	0	0	- 61	- 68	+123	+258	+184	+190	+184	+307	+301	+144						
17	X	+246	+196	+184	+276	+184	+129	+178	+289	+246	+276	+313	+184	+172	+ 61	+ 61	- 49	- 12	+313	+368	+141	+ 37	+184	+123	+172	+178						
18	X	+246	+356	+301	+141	+375	+264	+239	+307	+399	+362	+350	+246	+ 61	0	- 49	- 25	- 37	+172	+172	+154	+190	+307	+344	+424	+221						
19	X	+491	+387	+479	+393	+289	+313	+332	+203	+301	+362	+405	+332	+184	-129	+123	0	+111	+368	+215	+209	+332	+583	+503	+503	+304						
20		+ 49	+184	+350	+215	+338	+645	- 61	+823	+296	+798	+786	+362	+184	+467	+682	-497	-166	+ 74	-147	+743	+356	+860	+338	-424	+360						
21		-338	-209	+ 31	+ 31	+ 80	-252	+172	+393	+233	+522	+534	+804	+276	+215	-454	-307	- 12	+ 43	+184	+307	+178	+ 68	-141	+221	+107						
22		-319	+ 74	-233	+135	- 55	+301	-307	+190	+528	+123	+356	+332	+381	+ 92	-111	-135	0	+307	-184	- 12	+ 49	+184	+ 74	0	+ 74						
23		0	+ 81	+338	+ 61	+ 68	+123	- 55	+ 68	- 49	+135	+221	+589	+810	+246	+ 49	+ 43	-282	+141	+111	+ 61	+178	- 92	+ 31	+ 61	+122						
24		+147	-190	+ 18	+ 68	+166	- 68	+ 92	+ 61	+147	+239	+368	+264	+301	+319	- 68	-178	-196	+111	+ 61	+276	- 43	+252	+209	+258	+209						
25		-553	+424	+301	-141	- 61	- 49	+ 61	+111	+123	+190	+387	+399	+190	+ 61	+190	-209	-178	0	+123	+184	+313	-356	+129	+ 61	+ 71						
26		- 61	+ 80	-381	+479	+196	+350	+270	+141	+135	+252	+313	+563	+430	+ 68	-233	- 92	- 31	+ 74	+ 68	+190	+196	+123	- 25	+ 61	+132						
27		+ 68	+117	- 31	- 86	- 61	- 31	-295	+178	+184	- 98	+246	+399	+307	+172	+123	+111	- 49	+ 92	+147	+313	+ 43	+ 31	- 61	0	+ 76						
28		+ 74	-405	+129	+184	+ 74	+ 68	+ 74	+215	+ 74	+270	+319	+252	+ 74	+264	+651	+154	+890	+111	+123	- 18	+ 43	+154	+307	+ 98	+174						
29		-233	-160	- 68	- 74	-160	+129	0	-129	+147	- 98	+479	+240	+ 92	+362	+154	+166	-246	+129	+ 98	+ 49	+356	-295	+270	+375	+ 66						
30		-663	+1050	+307	-135	-184	- 61	+ 92	- 86	+184	+424	+295	+614	-258	-190	-430	-522	+209	+319	+154	- 98	+675	+645	+301	- 37	+150						
31		-196	+196	+ 61	- 68	-190	+ 80	+227	+166	+172	+768	+448	+154	+154	+147	+ 49	-190	-154	- 25	+ 61	+221	+233	+147	-233	+215	+102						
MEANS ALL DAYS		+ 13	+128	+ 68	+ 61	+ 83	+ 81	+ 68	+143	+199	+255	+347	+346	+205	+158	+102	- 40	- 13	+ 95	+119	+167	+158	+167	+147	+113	+132						
MEANS 10 DAYS		+172	+165	+ 95	+126	+156	+ 97	+115	+117	+184	+244	+333	+267	+178	+ 78	+ 72	- 38	- 50	+118	+108	+106	+ 99	+193	+195	+213	+140						

* = 10 LEAST DISTURBED DAYS

TABLE 271

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										MEAN
		NORTH-EAST										58.4										N 17° 8' E										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-234	-123	-105	-140	-76	-105	-274	-269	-158	+175	+415	+70	+146	+228	-263	-409	0	+53	+64	+123	-169	-70	-58	-88	-53						
2	X	0	-140	0	-93	-140	-93	-53	0	+193	+409	+134	-47	-222	-438	-526	-269	+29	+164	+64	+70	+47	0	-58	-111	-45						
3	X	-123	-175	-117	-169	-64	-175	-58	-123	+128	+239	+175	-111	-123	-12	-327	-286	+123	+93	-58	+187	+164	+245	-29	0	-25						
4	X	-117	-234	-175	-117	+105	+58	0	+70	+239	+380	+315	0	-239	-409	-485	-286	-123	+70	0	0	+47	-53	-64	-82	-46						
5		-105	-117	-199	-123	+64	-111	-88	+164	+164	+234	0	-298	-228	-339	-431	-199	-58	+164	+234	+456	+975	+642	-82	-175	+20						
6		-88	-718	-117	-181	-117	-105	-117	-53	+58	+228	+58	-117	+222	-140	-234	-105	-35	0	-23	0	-29	-117	-29	+70	-70						
7		+93	0	-23	-187	-111	-58	-70	-53	+263	+572	-380	-251	-380	-105	-169	-58	+245	-53	-70	+58	0	-93	0	0	-35						
8		+310	-70	+47	-111	-234	-29	-164	-175	-58	+181	0	-385	-467	-222	0	+292	-47	+105	0	+58	-117	-12	-175	0	-53						
9		-117	+269	+123	-169	-280	-29	-222	-292	+689	+596	+234	-123	-496	-531	-292	-105	-58	+105	+64	-35	0	0	-41	-47	-32						
10	X	-88	-105	-58	-181	-105	-70	-397	0	+245	+456	+263	-444	-607	-444	-199	+164	+175	+169	-29	+58	+53	+117	+164	0	-36						
11	X	-47	+181	0	-234	+164	+117	-199	+175	+175	+280	-76	+23	-315	+29	-280	-53	0	-58	+105	-64	0	-12	-58	-117	-11						
12		+35	-228	+164	-111	-164	-105	-234	-239	+187	+350	+187	-444	-666	-397	-41	+117	+175	+234	+47	0	0	+58	-93	-105	-53						
13	X	-169	-23	-29	-175	-105	-70	-58	+12	+123	+187	+111	-274	-467	-286	-257	-111	+164	+64	0	+47	-29	-123	-64	-117	-69						
14	X	-105	+29	-175	-123	-58	-23	0	+23	+169	+117	0	-409	-520	-286	-76	+187	+117	+58	+111	+123	0	+82	-58	-70	-37						
15	X	-175	-175	-152	+12	-169	-123	-181	+128	+239	+257	+58	-438	-619	-356	-111	+58	+123	+181	+58	+29	+23	0	-53	-111	-62						
16		+58	-111	-146	-269	-117	-164	0	-128	+29	+409	+70	-298	-315	-181	-263	-169	+123	+269	+1361	-321	-117	-146	-58	+123	-15						
17		+134	+99	-164	-321	-350	-204	-292	-315	+158	+098	-420	+158	+164	+152	+245	+123	+368	-228	-47	+210	+234	-356	-58	0	+16						
18		-420	0	-117	-496	+70	-53	-29	+292	+93	+93	-64	-257	-70	-526	-105	-29	+882	-245	-199	+58	+58	+204	-187	-76	-47						
19		-350	-526	+210	-234	-175	+70	+146	0	+234	+88	-111	-327	-234	-350	-146	+58	+374	-123	+117	+234	-181	+35	-175	-58	-59						
20		-304	-286	-23	+105	-164	-105	+128	+187	+234	+140	-187	-537	-473	-210	+175	-222	-117	-128	+58	+187	+175	-204	-82	-111	-74						
21	X	-105	-82	-53	-58	-58	-88	-23	+82	+187	+298	+175	-234	-385	-304	-234	-29	+58	0	-58	-47	-105	-58	-111	-164	-58						
22		-146	-117	-76	-164	-175	-175	-58	-64	+175	+269	+262	-76	-47	-350	-175	-234	+18	+35	+12	0	0	-123	+47	-53	-51						
23		-164	-485	+280	+257	-345	-222	-82	+181	+491	+555	+549	-257	-234	-181	0	0	+164	-234	-58	0	0	-58	-152	+234	+10						
24		+18	-292	-368	+152	-117	-654	+152	+29	+187	-164	+210	+199	+210	-117	+269	-199	+117	+117	+93	0	+491	+70	-526	-280	-17						
25		-584	+105	0	-543	+356	-204	-315	-216	+58	+345	-23	-105	-128	-199	-140	+175	+537	+596	-397	-181	-158	-58	-146	+117	-46						
26		-146	-169	-257	-409	-228	-105	-140	+105	+93	+41	-158	-123	-140	-58	+93	-41	+105	0	+58	+123	-181	-146	-105	-146	-81						
27		-234	-64	+58	-461	+70	+199	-88	-199	+432	+257	+117	+41	-269	-368	-310	-70	+117	+164	+164	+175	-64	-117	-175	-105	-45						
28		-64	-41	-491	+88	-29	-315	-210	+117	+239	+228	+140	-239	-234	-380	-158	-47	+140	+298	+128	+117	0	+70	+53	-53	-27						
29	X	+58	-152	+47	+117	-117	-82	+29	+58	+239	+310	+140	-228	-415	-310	-380	-134	+292	+175	0	+70	+292	+175	-280	-111	-9						
30		-58	-204	-181	-117	0	-175	-245	+58	+117	+58	0	+47	-467	-380	-64	+64	+164	+58	-53	0	0	-58	-58	-105	-67						
31		-526	+210	0	0	-117	-111	-105	+64	+93	+117	-88	-239	-374	-234	-222	-70	+58	-12	-12	-41	+47	+64	+58	-111	-70						
MEANS ALL DAYS		-121	-121	-68	-144	-90	-107	-105	-12	+184	+284	+68	-185	-291	-249	-167	-61	+136	+67	-56	+43	+49	-5	-86	-60	-40						
MEANS 10 DAYS		-87	-88	-71	-102	-55	-55	-94	+42	+194	+293	+130	-216	-391	-282	-288	-76	+91	+92	+19	+47	+49	+37	-61	-88	-40						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-129	-49	0	-68	0	0	+49	-55	+62	+129	+443	+197	+430	+554	-197	-412	-172	+111	+62	+123	-154	-62	+86	+62	+42						
2	X	+62	-62	+74	-62	-135	0	0	-62	+74	+381	+184	+252	+55	-277	-430	-271	-31	+74	+18	+74	+117	+62	+43	0	+6						
3	X	-18	-49	0	-68	+18	-62	-12	-178	0	+172	+283	+240	+148	+215	-252	-215	+258	+80	0	+191	+111	+363	+49	0	+53						
4	X	+55	-129	-98	-172	+135	+74	0	-37	+215	+381	+492	+363	+62	-160	-320	-246	-178	-12	+49	+62	+123	+62	+62	+35							
5		+74	+154	+55	+74	+234	+117	+62	+172	+160	+166	+332	+62	0	-228	-357	-148	0	+191	+443	+763	+1304	+978	-184	-277	+173						
6		+111	-332	+184	+74	+234	+197	+129	+172	+117	+271	+277	+178	+480	+148	0	-25	+74	+74	+92	+74	+80	-49	+62	+246	+120						
7		+308	+111	+197	+86	+92	+74	+62	-74	+258	+898	+314	+74	-301	0	-31	0	+246	-80	-62	+80	0	-49	+31	+123	+98						
8		+418	-68	+37	+25	0	+123	+111	0	0	+240	+381	0	-191	-197	+154	+430	0	+123	+37	+148	-55	0	-68	+184	+76						
9		-129	+430	+314	-25	-191	+228	+123	-314	+584	+664	+621	+357	-215	-430	-160	-178	-25	+246	+135	-12	0	0	+62	+111	+92						
10	X	-49	-37	-43	-74	-55	-62	-203	-123	+62	+554	+615	-68	-295	-301	-148	+197	+184	+308	+172	+62	0	+74	+209	+62	+43						
11	X	+12	+234	+49	-141	+246	+184	+314	+289	+301	+474	+437	+646	0	+111	-123	0	-68	+74	+166	+92	+80	+215	+246	+215	+169						
12		+308	-25	+443	+221	+246	+314	+314	+117	+246	+394	+609	+117	-246	-129	+86	+184	+301	+234	+184	+129	+117	+197	+123	+197	+195						
13	X	+184	+259	+314	+277	+308	+344	+308	+332	+344	+332	+394	+277	0	+92	-92	0	+258	+166	+172	+178	+172	+129	+135	+160	+210						
14	X	+184	+283	+197	+246	+301	+344	+357	+258	+314	+344	+314	0	-191	-191	+111	+344	+246	+178	+197	+246	+172	+209	+129	+62	+194						
15	X	-18	-62	-62	+148	0	-31	-49	-62	+240	+320	+258	-92	-264	-154	0	+62	+129	+258	+62	+62	+141	+111	+172	+62	+51						
16		+129	-12	-62	-29	-172	-105	-37	-31	+117	+554	+363	+154	-55	-123	-326	-295	+123	+523	+1679	-308	-221	0	+123	+191	+91						
17		+117	-49	+12	-240	-308	-209	+92	-357	+92	+1581	-6	+129	+258	+474	+406	+184	+135	-234	+98	+234	-246	-129	+80	+191	+96						
18		-166	-37	-62	-308	-58	-31	-111	+178	+92	+406	+412	+215	+49	-824	-141	-98	+824	-351	-184	+62	+62	-135	+123	+117	+1						
19		-135	-234	-62	-74	-148	-86	+98	+92	+215	+326	+418	-98	-123	-320	-105	-92	+135	+55	+105	-160	+111	+154	-74	+25	+1						
20		-191	-123	+31	+135	+92	-49	+80	+123	+197	+271	+172	-246	-332	-135	+308	-406	-172	-68	+62	+351	+178	-154	+25	0	+6						
21	X	-25	-31	0	0	0	-62	+68	+98	+221	+258	+320	+271	-62	-301	-326	-184	0	-37	-74	-68	-12	0	-25	-74	-2						
22		-271	0	-49	-111	-68	-74	-62	-117	+18	+117	+332	+418	+400	-252	-178	-184	+92	+129	-49	0	+123	-123	+68	+111	+11						
23		-92	-480	+184	+314	-178	-172	+215	+375	+787	+676	+701	-111	-369	-111	+49	0	+117	-424	+49	-74	+74	-12	-92	+418	+77						
24		+148	-277	-258	+154	+98	0	+166	-92	+197	+535	+295	+184	+191	-178	+357	-31	+74	+246	+129	+301	+498	+246	-49	0	+122						
25		-184	+191	+135	-129	+295	0	0	-62	+178	+357	+135	+289	+123	-123	0	+314	+812	+314	-271	-191	+12	+172	-37	+295	+109						
26		+172	+258	+191	+283	+166	+375	+301	+295	+178	+252	+74	+394	+258	+172	+320	+105	+252	+98	+215	+277	+43	+160	+209	-37	+209						
27		+62	+178	+283	-18	+148	+344	+271	+111	+523	+437	+332	+338	+74	-295	-197	+68	+123	+117	0	+31	+68	+191	+117	+191	+146						
28		+191	+123	-191	+295	+184	+31	-25	+62	+172	+277	+369	+308	+160	-394	-123	-62	+111	+178	-49	+117	+62	+123	+43	0	+82						
29		+111	-68	+135	+234	+228	+191	+184	+184	+314	+314	+400	+111	-123	-178	-314	-148	+234	+191	-123	+111	+363	0	-129	+62	+95						
30	X	+129	-123	0	+49	+209	+375	+234	+332	+240	+295	+289	+492	-344	-191	+98	+166	+191	+31	-37	+31	+62	+135	+172	+209	+127						
31		-184	+480	+430	+301	+184	+178	+184	+308	+332	+246	+172	+197	+55	+68	-43	+62	+135	+62	+31	-49	+117	+31	+74	+117	+146						
MEANS																																
ALL DAYS		+38	+15	+77	+45	+68	+82	+104	+62	+221	+407	+346	+182	-12	-118	-63	-28	+142	+92	+107	+95	+113	+94	+58	+100	+93						
MEANS																																
10 DAYS		+50	+34	+57	+39	+105	+92	+97	+70	+208	+353	+370	+200	-67	-114	-189	-46	+103	+128	+64	+101	+127	+122	+89	+61	+86						

★ = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 273

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY		COMPONENT										DIRECTION N 17° 8 E										MEAN				
		NORTHERLY					LINE					LENGTH IN KMS					58.4									
*	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1	X	- 82	- 63	-151	- 88	- 63	-302	+ 63	- 25	+183	+202	-284	- 63	-277	-290	- 94	- 63	0	0	0	-101	+ 50	- 38	- 63	-126	- 70
2		- 13	- 25	- 94	+195	- 88	-258	- 88	- 63	+ 63	+ 88	- 94	-208	-258	-151	-258	- 63	+113	+ 88	- 63	+265	+498	+378	0	-290	- 14
3		+246	+265	+ 76	-321	- 82	-284	0	+113	-120	- 50	- 82	-302	-252	-573	-101	+ 69	-113	0	+227	-164	+ 69	-113	- 63	+ 63	- 62
4	X	-265	0	- 50	-101	0	+138	-101	+151	+145	+101	-195	-176	-340	-239	-328	-258	-138	- 50	+ 82	0	- 69	- 82	- 63	- 32	- 78
5		- 50	-120	+126	+113	-252	+ 88	0	-290	-586	- 69	- 19	-246	-132	- 63	+113	-113	+189	+ 76	+151	+674	-346	+ 50	+391	+ 50	- 11
6		- 69	-258	-372	-271	+284	+ 69	-233	-284	0	0	+ 63	+101	- 25	- 94	-296	- 63	-258	+ 50	- 44	+132	+ 76	+132	+794	-365	- 39
7		-189	+ 88	-126	-252	-126	-126	-353	-309	- 63	+126	+277	-359	-302	+ 82	-334	-189	+189	-101	-113	+ 13	+378	-265	- 44	- 50	- 90
8		-239	- 63	- 94	+252	-649	+290	+ 25	+132	+346	+ 25	+113	+ 94	-328	- 94	- 76	-113	- 76	+176	+ 32	+170	+202	-302	+126	+ 88	+ 2
9	X	- 76	-258	-195	-170	-132	- 82	-120	-227	-195	+101	0	+ 19	- 63	-164	-239	+ 63	+ 63	+139	+209	+ 76	+ 50	+126	-126	-258	- 60
10	X	-220	-132	+ 63	+ 94	-158	-321	+ 25	-126	-101	-183	- 94	-252	-246	-195	-145	- 25	+113	+202	- 69	+183	0	- 88	+ 32	+101	- 64
11	X	-302	+ 25	- 88	0	0	- 13	-202	-189	- 69	+139	+164	- 32	-315	-176	-314	+ 13	+139	+126	+158	+ 82	+113	- 38	- 63	-113	- 36
12	X	- 50	-227	-397	0	- 69	- 63	- 76	0	+ 50	0	- 38	-101	-189	-189	-202	- 13	0	+246	+ 25	+ 76	+139	-120	-252	-183	- 68
13		+236	+214	0	+321	-214	-378	+172	+227	+882	+132	-214	-302	+227	+239	+296	+277	+ 69	+132	+983	-189	-176	- 69	-378	-321	+ 37
14		-158	0	-422	-731	+447	+202	- 25	+151	+195	-158	+ 38	-195	-195	+ 38	+ 32	+126	+145	+680	+309	+ 94	+ 94	-403	+359	+ 94	+ 30
15		-139	-302	-662	+290	+101	-113	+ 76	+ 13	+353	+214	- 57	-126	-378	-554	-195	- 25	+126	+202	+176	+825	-227	- 76	- 50	-132	- 28
16		-189	- 88	-252	+ 88	0	-107	+ 50	+151	+189	+151	0	-353	-309	-208	+315	+227	- 57	+176	+107	0	+378	+ 50	-384	-183	- 10
17		+151	- 76	0	-296	+309	0	+340	+592	+132	+113	-126	-195	-227	-302	-252	- 50	+ 88	+139	+101	+ 50	+ 25	+126	0	0	+ 27
18	X	- 63	-239	+ 50	+ 76	-346	+101	+101	+176	+126	+ 19	- 94	-189	-183	- 94	- 25	+113	- 69	0	+ 50	- 25	+ 50	+ 76	+ 50	+ 69	- 11
19	X	- 50	-126	- 88	+120	-126	- 94	+ 63	+126	+302	+315	-365	-195	-220	-239	- 19	+113	+126	0	+ 50	0	+ 88	+ 76	+101	0	- 2
20		+164	-410	+126	0	+ 38	-101	-284	+202	+ 88	+164	+ 63	-170	-183	+113	- 88	+189	-132	+252	+712	-107	- 63	- 57	-170	-164	+ 8
21		-126	- 63	+ 63	-145	- 57	0	- 50	-296	+107	+113	-101	+365	-189	+181	+441	+151	+ 94	+ 32	-176	+334	+662	-403	-214	-334	+ 41
22		-139	+ 63	-788	- 32	+699	-485	+ 69	+378	+271	+189	-340	-214	+227	+265	+164	+542	-277	+189	+ 76	+252	-233	+176	- 25	-189	+ 35
23		-561	+195	+ 63	-346	+ 69	+195	-158	+321	- 44	+353	+ 88	-328	-164	+220	+561	+781	+731	-214	+183	+346	+365	+158	-220	-529	+ 86
24		+ 88	+ 82	+416	- 94	-271	+252	+164	+914	+233	+183	+ 38	+ 94	0	-164	+ 63	+227	+302	+176	+ 69	+113	+132	0	+120	0	+131
25		- 38	+132	+170	-151	-101	+271	+145	+183	+372	+302	+126	-126	-346	0	+239	+479	+447	+ 63	+151	+825	+151	- 19	+132	-277	+130
26	X	-139	+189	-372	-548	+491	+302	+410	+435	+126	+151	-113	-403	-542	-195	- 63	+ 76	+126	+189	+145	+189	+126	+ 76	+ 88	+ 38	+ 33
27	X	- 76	+ 63	-120	+126	+ 88	+113	+195	+378	+435	+202	-309	-630	-504	-359	0	+176	+239	+265	+365	+ 63	+ 19	+ 32	+ 76	+ 63	+ 38
28		- 69	- 94	0	+151	+435	+340	+296	+466	+302	-158	-296	-542	-472	-334	-107	+ 94	+189	+258	+315	+158	+183	+386	...	...	..
29		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		- 85	- 42	-115	- 69	- 8	- 26	- 42	+105	+127	+108	- 58	-166	-212	- 96	- 26	+ 98	+ 81	+120	+145	+155	+ 94	+ 23	+ 6	-110	- 12
MEANS 10 DAYS		-132	- 77	-135	- 49	- 32	- 22	+ 36	+ 70	+100	+105	-133	-202	-288	-214	-133	+ 20	+ 60	+112	+104	+ 54	+ 57	+ 2	- 22	- 44	- 32

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT EASTWARD										LINE		OW		LENGTH IN KMS										93.9										DIRECTION										E 0.5 N									
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																													
1	X	+ 50	+ 75	+ 50	+ 87	0	+ 62	+ 230	+ 50	+ 99	+ 317	- 31	+ 366	+ 149	0	- 62	- 62	- 31	- 62	- 50	- 75	+ 68	+ 37	+ 19	- 50	+ 62																													
2		- 50	+ 87	- 68	+ 174	0	- 143	- 25	- 112	- 99	- 25	0	+ 62	+ 342	+ 149	- 236	- 68	+ 112	+ 186	+ 31	+ 368	+ 956	+ 435	- 56	- 199	+ 76																													
3		+ 118	+ 224	- 149	0	- 56	- 298	+ 118	+ 68	- 137	- 68	+ 186	+ 484	+ 273	- 404	- 149	- 112	- 112	+ 130	+ 329	+ 25	0	- 62	- 68	+ 155	+ 21																													
4	X	- 186	+ 62	0	- 25	+ 62	+ 25	+ 87	+ 112	+ 112	+ 180	+ 186	+ 75	- 62	- 75	- 186	- 155	- 168	- 25	+ 193	- 56	- 118	+ 168	+ 99	+ 50	+ 15																													
5		+ 62	+ 50	+ 391	+ 497	+ 168	+ 360	+ 242	+ 62	- 255	+ 124	+ 242	- 323	+ 286	+ 329	+ 646	- 62	+ 298	+ 242	+ 236	+ 876	- 304	+ 50	+ 317	+ 329	+ 230																													
6		+ 255	+ 124	- 130	- 68	+ 348	+ 310	+ 174	- 155	+ 112	+ 75	+ 155	+ 366	+ 435	+ 304	0	+ 137	+ 62	+ 242	+ 310	+ 112	- 75	+ 199	+ 689	- 559	+ 143																													
7		- 50	+ 180	- 62	+ 193	+ 124	+ 236	- 50	+ 217	- 19	+ 124	+ 553	- 99	+ 168	+ 310	- 217	- 43	+ 255	- 193	- 99	- 50	+ 180	- 174	- 56	- 93	+ 56																													
8		- 193	- 25	- 248	+ 75	- 193	+ 87	0	+ 99	+ 267	- 124	+ 68	+ 335	- 75	+ 112	- 99	- 186	+ 62	+ 50	+ 25	+ 62	- 199	- 75	+ 211	+ 137	+ 7																													
9	X	- 112	- 174	- 25	- 68	- 56	+ 87	+ 50	- 50	- 99	0	+ 118	+ 248	+ 273	+ 112	- 217	- 25	- 124	+ 87	+ 168	+ 19	+ 75	+ 19	- 174	- 317	+ 10																													
10	X	- 174	- 161	+ 62	+ 93	- 112	- 149	+ 19	- 130	- 248	- 93	+ 75	- 19	+ 25	- 62	- 56	- 12	+ 75	+ 68	- 62	+ 50	- 62	- 68	+ 99	0	- 35																													
11	X	- 292	0	0	+ 87	+ 180	+ 199	+ 124	- 31	- 62	+ 93	+ 304	+ 366	- 50	- 155	- 261	- 56	+ 180	+ 186	+ 186	- 50	+ 87	- 124	- 112	- 75	+ 30																													
12	X	- 62	- 130	- 310	- 50	0	0	- 87	- 112	- 68	- 186	0	+ 93	+ 62	0	- 62	+ 62	+ 50	+ 397	- 62	- 31	+ 155	- 112	- 180	- 68	- 29																													
13		+ 497	- 124	+ 137	+ 546	- 62	+ 75	- 491	+ 199	+ 938	+ 534	+ 397	+ 149	+ 360	+ 466	+ 615	+ 261	- 124	+ 62	+ 565	+ 124	- 217	+ 130	- 497	- 155	+ 183																													
14		+ 81	+ 50	- 124	- 242	+ 99	+ 186	0	+ 112	+ 279	- 292	- 25	+ 118	+ 236	+ 155	+ 211	+ 310	+ 286	+ 435	+ 410	+ 224	+ 12	- 621	+ 515	+ 279	+ 112																													
15		- 25	- 168	- 379	+ 99	+ 193	- 81	+ 99	+ 43	+ 310	+ 224	+ 422	+ 342	0	- 453	- 168	- 130	+ 31	+ 130	+ 149	+ 696	- 112	+ 12	0	- 19	+ 51																													
16		- 124	+ 56	- 50	+ 205	+ 180	+ 75	+ 180	+ 99	+ 174	+ 248	+ 242	+ 149	+ 50	+ 81	+ 602	+ 106	- 112	+ 186	0	+ 87	+ 373	+ 68	- 186	- 62	+ 109																													
17		+ 273	+ 174	+ 118	- 31	+ 298	+ 99	+ 267	+ 497	+ 155	+ 348	+ 304	+ 217	+ 87	- 279	- 286	- 50	+ 43	+ 174	+ 75	+ 62	+ 56	+ 87	+ 130	+ 68	+ 120																													
18	X	+ 56	- 50	+ 99	+ 236	+ 118	+ 186	+ 273	+ 236	+ 186	+ 75	+ 161	+ 174	+ 112	- 25	+ 56	+ 174	0	- 50	0	+ 31	+ 68	+ 174	+ 81	+ 112	+ 103																													
19		- 31	+ 62	- 56	+ 75	+ 50	- 50	+ 186	+ 317	+ 366	+ 609	+ 56	- 106	- 186	- 149	0	+ 130	+ 75	+ 50	0	0	+ 99	+ 174	+ 186	+ 62	+ 80																													
20		+ 224	- 360	+ 118	+ 168	+ 50	+ 310	0	+ 87	+ 62	+ 292	+ 242	+ 193	+ 304	+ 397	+ 255	+ 168	+ 62	+ 62	+ 565	+ 75	+ 217	+ 124	+ 50	+ 137	+ 158																													
21		+ 174	+ 242	+ 323	+ 317	+ 329	+ 236	+ 460	+ 404	+ 186	+ 68	- 68	+ 304	+ 205	+ 1192	+ 782	- 93	- 87	+ 56	- 68	+ 472	+ 31	+ 205	+ 25	- 242	+ 227																													
22		+ 124	+ 193	- 273	+ 180	+ 484	+ 81	+ 186	+ 484	+ 559	+ 907	- 143	+ 342	+ 348	+ 565	+ 155	+ 509	- 87	+ 112	+ 168	0	+ 25	0	+ 310	+ 130	+ 223																													
23		- 124	+ 310	+ 186	- 25	+ 62	+ 360	+ 248	+ 298	- 242	+ 323	+ 708	+ 460	- 317	+ 37	+ 441	+ 428	+ 329	- 261	+ 62	+ 211	+ 261	+ 174	- 56	- 385	+ 148																													
24		+ 81	+ 149	+ 273	+ 62	+ 161	+ 335	+ 56	+ 776	+ 360	+ 286	0	+ 224	- 31	- 174	- 130	- 87	+ 118	- 81	- 86	+ 25	- 81	- 112	- 56	- 50	+ 80																													
25		- 279	+ 155	+ 161	- 19	- 75	+ 317	+ 180	- 87	+ 193	+ 273	+ 342	+ 248	- 261	- 43	+ 99	+ 193	+ 174	- 68	+ 56	+ 217	+ 149	+ 174	- 25	- 186	+ 79																													
26	X	- 118	+ 143	- 267	- 143	+ 422	+ 397	+ 497	+ 317	+ 56	+ 137	+ 106	- 112	- 230	- 87	- 81	- 118	- 106	+ 112	+ 118	+ 130	+ 81	+ 62	+ 50	+ 50	+ 59																													
27	X	- 149	- 31	- 130	+ 56	+ 50	+ 124	+ 197	+ 248	+ 197	+ 180	- 68	- 472	- 360	- 255	- 68	0	0	+ 87	+ 205	- 12	- 143	- 43	+ 31	+ 19	- 14																													
28		- 130	- 137	- 161	+ 50	- 186	0	+ 68	+ 180	+ 236	+ 62	- 99	- 261	- 242	- 118	- 50	- 75	- 62	+ 124	+ 279	- 37	0	+ 472	..	..	..																										
MEANS																																																							
ALL DAYS		+ 1	+ 41	- 15	+ 92	+ 105	+ 127	+ 119	+ 150	+ 125	+ 171	+ 168	+ 179	+ 79	+ 76	+ 59	+ 45	+ 47	+ 86	+ 123	+ 133	+ 59	+ 33	+ 50	- 35	+ 84																													
MEANS																																																							
10 DAYS		- 102	- 20	- 63	+ 35	+ 71	+ 88	+ 158	+ 96	+ 54	+ 131	+ 91	+ 11	- 27	- 70	- 94	- 6	- 5	+ 85	+ 10	+ 1	+ 31	+ 29	+ 10	- 22	+ 25																													

* = 10 LEAST DISTURBED DAYS

TABLE 275

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		NORTHERLY					LINE					OM					17° 8' E					DIRECTION										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3		-140	0	-272	-431	+169	+204	+431	-233	+570	+99	+210	-518	-233	-186	-58	0	+58	+454	+274	-204	-227	+239	+326	-180	+14						
4		-436	-29	-442	+47	+239	0	-41	-169	-361	-23	+210	-47	-116	-169	+582	-180	-116	+471	-407	0	+320	-105	+279	-274	-32						
5		-215	-169	-204	-239	-151	-29	+239	+99	-29	-116	+58	-64	-343	-87	+70	+186	-12	+151	+256	-268	-64	+221	-175	+111	-32						
6	X	-518	+262	-58	-663	+361	+116	+180	+402	+349	+93	0	-565	-396	-233	-116	+64	-163	-17	+64	-64	-221	-64	0	0	-49						
7		+47	-58	+169	-58	0	+81	+58	+221	0	-204	-402	-378	+70	-239	+70	+175	-58	+134	-47	+291	-227	-105	+111	+35	-13						
8	X	-105	-169	-105	+64	+105	+227	+233	+431	+116	-402	-541	-495	-314	-58	+58	+175	+180	+407	+175	-169	-140	0	+70	-52	-13						
9	X	-407	+221	+116	-41	0	0	+186	+180	-99	-116	-163	-320	-134	-215	-93	+12	+710	-198	-83	+35	+105	+35	-64	-250	-33						
10	X	-105	-58	-175	-35	+111	0	+227	+396	+175	-163	-518	-582	-466	-192	+58	+99	+140	+233	+116	-81	-64	-35	0	0	-38						
11		-105	0	0	0	+140	-140	+175	+256	+58	-320	-454	-454	-180	-326	+175	+704	+186	+111	0	+111	-58	-29	-105	-76	-14						
12		-47	-52	-35	-58	0	+87	-23	+349	+175	-227	-431	-640	-413	-35	+285	+524	+192	+64	-116	+17	+180	-146	-70	-105	-22						
13		-105	-105	-105	-64	0	+81	+180	+192	+180	-169	-436	-355	-454	-192	+355	+116	+501	+524	+432	-436	+407	+693	-274	+582	+106						
14		-646	+361	-495	+186	+349	+99	+314	+582	+192	-29	-349	-210	-372	-274	-215	+553	-349	-163	-140	-81	+116	-163	-140	-442	-55						
15		-460	-297	+396	+116	-343	-169	+396	+349	+279	+64	-274	-442	-413	-268	+233	+163	+180	+151	-58	0	-105	+233	-175	-157	-25						
16	X	-105	-151	-180	+17	0	+105	+105	+215	+244	+23	-268	-256	-361	-279	-140	0	0	-41	-52	+99	+52	-81	-105	-157	-55						
17	X	-76	-146	0	-111	-116	-70	+58	+442	+233	+105	-257	-281	-292	-369	-474	-222	0	+181	+58	-18	-23	+105	+47	-47	-53						
18		-58	0	-58	-47	-58	-47	+170	+181	+292	+164	+181	0	-287	-415	..	..	..	..	..	..	..	..	..	..	..
19		..	..	..	..	..	..	..	-503	+351	+158	-117	+35	-58	+246	-205	+117	+205	+749	-88	-164	+263	+58	-357	+70	..
20		-275	+410	-486	+176	-82	+158	-41	+374	+316	-170	-117	-135	-211	-193	+292	-257	-58	+94	-117	+684	-240	-176	+41	-731	-31						
21		+228	+322	-234	-357	-140	+94	+333	+199	+263	-146	+23	+298	-199	-410	-473	+105	0	-64	+58	+790	-474	+462	-644	+12	+2						
22		-339	-58	-380	+234	-35	-170	0	+415	+410	+585	-105	-374	-380	-275	-222	-170	+234	-187	-176	0	+123	+58	-181	-410	-58						
23		+164	+117	-199	0	-181	+164	+123	+410	+240	+146	-369	-410	-369	-123	+322	+421	-152	-234	+41	+117	-53	-146	-117	-117	-9						
24	X	-99	-88	+47	-211	-58	+70	+123	+292	+287	+53	-234	-187	-170	+58	+123	-228	-47	0	-58	+47	+117	-70	0	-298	-22						
25	X	0	+58	-545	+234	+164	+117	+70	+234	+176	+105	-99	-117	-240	-292	-170	-94	0	+176	+176	+105	+64	+176	-123	-170	0						
26	X	-58	-140	-58	+94	0	+76	+76	+287	+222	-47	-176	-117	-211	-263	-275	-234	-58	+64	+105	+58	0	-64	-94	-58	-36						
27	X	-70	-58	-12	-94	-58	+58	+164	+345	+292	+123	-351	-374	-526	-380	-222	-176	+58	+240	+772	+205	-246	-374	+47	-23	-38						
28		0	+181	+29	1533	0	+240	-515	+585	+374	+287	-240	-439	+82	-35	+269	-29	+392	+105	+117	+257	+70	-88	+298	-410	+128						
29		-158	-117	+123	-35	+205	+176	+298	+480	+585	+298	-35	-351	-649	-187	-117	+205	0	+292	+176	+673	-240	-18	-199	+170	+66						
30		-556	+105	+585	-199	-76	-29	+176	+433	+304	+193	-667	-228	-281	+456	-211	+831	+345	+924	+351	-585	+369	+152	-854	-357	+49						
31		-123	+562	-35	+322	-456	+965	+363	+357	+205	0	-354	-348	-336	-212	-389	-165	+260	+295	+106	+153	+112	0	+59	+59	+58						
MEANS ALL DAYS		-174	+33	-95	+16	+5	+93	+144	+301	+213	-9	-235	-311	-293	-184	-10	+95	+90	+154	+112	+64	-21	+26	-76	-124	-8						
MEANS 10 DAYS		-154	-27	-97	-75	+51	+70	+142	+322	+200	-47	-261	-329	-311	-222	-125	-60	+82	+104	+127	+22	-57	-37	-22	-106	-34						

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		..	..	..	..	..	..	..	..	..	..	..	..	-1401	+627	+408	-987	-505	-920	-719	-609	-493	-347	-378	-414	..
2		-244	-244	-298	-116	-390	+104	-146	+262	+390	+719	-152	-55	-408	-432	-213	-518	-304	-167	-183	-164	-286	-365	-61	-177	-124
3		-231	0	-298	-438	+317	+658	+231	-97	+670	+134	+244	-371	-231	-183	-24	-152	-91	+505	+18	-286	-317	-183	+390	-91	+7
4		-481	-49	-475	+57	+262	0	-61	+274	-390	-195	+323	-767	+61	+244	+755	-152	-18	+61	-493	-18	+238	-244	+378	-378	-45
5		-110	0	-183	-128	0	+122	+219	+451	-371	+49	+244	+334	-195	0	+250	-177	-134	-171	-43	-164	-177	+158	-390	+213	-8
6	X	-475	+317	+122	-128	+499	+335	+238	+396	+432	+408	+371	-475	-213	-122	-128	-85	-244	-134	-49	-219	-177	-61	+30	0	+27
7		0	-55	+396	+292	+298	+341	+292	+207	+128	+73	-250	-97	+140	-311	+152	+268	-250	+183	-79	+171	-426	-183	+6	-61	+51
8	X	-134	-195	-256	-97	-55	+110	+104	+311	+158	-183	-341	-244	-195	-61	-128	+43	+85	+329	-329	0	-207	-61	-116	-280	-73
9	X	-250	0	+24	-122	-128	-110	-43	+73	-91	-110	-116	-122	+67	-195	-213	+85	+676	-244	-189	+183	-177	-61	-512	-73	-68
10	X	-164	-183	-219	-146	-134	-97	0	+189	+185	-67	-292	-469	-408	-268	-91	-67	0	+207	+104	-110	-177	-61	-73	0	-97
11		-110	-73	-61	-122	+97	-104	0	+122	0	-213	-311	-268	0	-110	+298	+828	-122	+97	+189	+304	+183	+244	+238	+244	+56
12		+292	+244	+250	+183	+256	+311	+426	+371	+298	-183	-61	+134	-61	+201	+408	+700	+238	+91	+49	+146	+122	+475	+670	+518	..
13		+438	+251	+110	+171	+183	+207	+304	+329	+335	+177	-146	+189	-251	-158	+664	+238	+438	1035	+834	+12	+408	-286	+536	+280	+282
14		-268	+371	-280	-329	+426	+157	+317	+518	+250	+304	+67	+250	-110	-250	-304	+463	-335	-85	+61	+128	+73	+177	-128	-329	+89
15		-256	-189	+487	+37	+128	-177	+341	+304	+341	+164	+122	-152	-177	0	+347	+116	+110	+274	-152	-49	+61	+298	+61	+67	+88
16	X	+49	+61	-79	+201	+43	+244	+146	+195	+292	+134	-91	+30	-128	-122	-67	-49	-24	+73	+55	+158	+116	+61	+12	-97	+51
17	X	+61	+225	+164	+67	+140	+171	+238	+451	+329	+300	+67	+122	+86	-153	-428	-245	-116	+92	0	-37	-31	+122	+147	-18	+73
18		0	+135	+31	0	+49	+31	+171	+86	+190	+196	+330	+343	-67	-257	-269	+49	-37	-245	-98	0	-147	-177	-49	+251	+21
19		+67	+98	-86	-98	-43	+116	+300	+233	+122	+86	+330	+153	+220	+594	-245	+61	+184	+679	-122	-98	+129	+31	-24	-343	+78
20		+171	+288	-202	-153	+122	+190	-98	+275	+337	+190	-251	+282	-110	0	+367	-330	+122	-153	-24	+190	-306	+202	+275	-612	+32
21		0	+177	+49	-171	+49	+37	+177	0	+306	+110	+209	+734	+416	-532	-490	-153	-184	-67	+110	+306	+116	+245	-324	0	+47
22		-416	+55	-185	+31	+129	+220	-190	+337	+453	+741	+184	-129	-392	-122	-233	-61	-37	-300	-198	0	+196	+67	-171	-312	-13
23		+147	+245	-110	+92	-55	+129	+184	+379	+300	+526	-165	-165	-177	-92	+655	+147	-214	-269	-67	+129	-98	-80	-67	-159	+51
24	X	-129	-122	+31	-49	-61	-24	+73	+177	+245	+55	-245	-12	+122	+251	+312	-330	-177	-86	-116	-67	-122	+18	+116	-294	-18
25	X	-31	+86	-300	+122	+245	+245	+116	+171	0	+61	+122	+312	+18	-55	+116	0	-67	+147	+214	+147	+184	+330	0	-116	+86
26	X	+24	-55	-61	+122	+67	+92	+61	+184	+177	0	+18	+239	+92	+49	-129	-202	-129	-55	+61	+61	-18	-43	-61	0	+21
27	X	-55	-49	+61	-49	0	+61	+110	+184	+190	-49	-55	-110	-300	-337	-257	-306	-67	+324	+114	+269	-404	-502	+98	-122	-10
28		-110	+116	-398	1279	+228	+171	-184	+785	+447	+110	-184	+588	+379	-404	+171	+190	+196	+196	+245	-61	-147	-208	+116	-581	+143
29		-98	-110	-18	0	-98	+61	+110	+214	+367	+636	+465	+92	+490	+202	-67	+177	-404	+31	+171	+453	-477	+61	-361	+73	+41
30		-551	-110	+367	0	-104	-67	+61	+129	+92	+985	+120	+208	+129	+1224	+465	+661	+208	+171	+483	-1255	+214	+575	-1040	-465	+146
31		+61	-673	-410	+122	+435	+1053	+141	+282	+153	0	-281	-122	-129	+92	-453	-263	+73	+61	-49	0	-129	-92	-73	-73	-46
MEANS		-159	+11	-71	+15	+61	+18	+111	+239	+209	+184	+78	-16	-70	-25	+8	+7	-30	+89	+63	-1	-66	-1	-36	-119	+30
ALL DAYS																										
MEANS		-110	+8	-51	-8	+62	+103	+104	+233	+163	+55	-56	-73	-96	-161	-101	-116	-6	+65	+86	+39	-101	-26	-36	-100	-1
0 DAYS																										

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TABLE 277

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	COMPONENT					LINE OR		LENGTH IN KMS										DIRECTION				N 17° 8' E				
		NORTH-EAST							58.4																		
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN	
1		+ 59	+ 59	+ 59	+ 59	0	+117	+258	+352	+398	- 70	-182	-199	-170	-225	+ 47	- 70	-141	+217	+123	0	+105	+ 94	0	- 47	+ 35	
2		-281	+182	+188	0	0	+ 12	+ 93	+352	0	-117	-188	- 59	-211	- 70	- 64	-176	0	+ 59	- 23	+381	- 53	- 59	-357	+105	- 12	
3	X	-123	+ 64	+ 64	- 47	-170	-240	+123	+498	-164	-299	-170	-188	- 43	-164	-234	- 47	+ 64	0	+ 59	+170	-105	- 59	+ 93	+ 53	- 36	
4		- 59	-141	-252	-164	- 76	- 12	+211	+246	+ 98	0	-188	-141	-117	-129	-240	-141	+ 53	0	- 64	- 29	- 59	0	+182	-105	- 47	
5	X	+ 29	-123	- 35	0	0	- 59	+105	+240	+164	-176	-299	-141	- 35	-100	-164	-111	- 70	- 64	+123	+ 70	- 64	- 18	- 41	+176	- 25	
6	X	- 70	- 59	- 59	+ 47	- 23	0	+100	-141	-240	-416	-328	-182	0	- 93	+164	+ 47	-146	- 82	- 59	- 70	+ 18	-117	- 70	-105	- 78	
7		-123	-170	- 64	-510	+422	+287	+164	+398	-182	-293	-475	-275	-123	+176	+246	+ 93	+182	-188	- 76	+ 64	- 41	0	-105	-111	- 29	
8		-123	- 6	-105	-188	- 23	-123	+234	+375	+129	-264	-316	-375	-270	-105	-199	+ 88	+211	0	-176	+ 29	+633	-264	- 59	+105	- 33	
9		-287	-369	0	+ 23	-123	-117	-176	+475	+193	-432	-486	-240	- 41	+141	0	+ 76	0	+ 64	- 47	+105	- 18	-146	- 93	-369	- 66	
10		-164	+545	-146	- 47	-234	+240	+193	+293	+ 47	-539	-498	-281	-422	+100	+176	+486	+123	-123	+375	-393	- 82	+129	-170	-123	- 21	
11		-580	+785	-510	+270	+170	- 23	+170	+434	-229	-416	-492	-322	- 64	+164	-164	+ 64	-123	+ 64	+293	+234	+117	+352	-908	+146	- 24	
12		+ 47	-299	0	-281	+ 64	+ 93	+457	+416	+293	+ 59	-410	-305	-234	-234	-223	-176	+ 59	+176	+205	+ 29	+ 47	- 59	-105	-117	- 21	
13	X	-270	- 29	- 70	-234	0	0	+234	+422	+229	- 23	-381	-416	-299	-363	-117	-123	0	+164	0	0	0	- 18	+123	- 47	- 70	- 54
14	X	- 47	- 59	- 82	+ 23	- 59	-123	+100	+299	+316	+234	- 47	-234	-404	-475	-422	-264	0	+164	0	- 93	-176	-105	- 64	-117	- 68	
15		-123	-123	- 70	- 18	0	- 59	+ 70	+211	+363	+105	- 70	-293	-387	-434	-352	+240	- 64	+ 29	+223	-117	-135	- 53	+ 35	- 29	- 44	
16		-105	-123	0	+287	-352	+176	0	+123	+440	+217	- 47	-182	-305	-404	-393	-129	+ 64	+264	+141	+ 59	+123	- 23	-182	-105	- 19	
17		- 23	-234	- 29	- 47	- 70	0	+234	+445	+293	+ 82	-176	-346	-311	-182	-146	- 64	- 59	+375	+182	-176	-170	-158	- 59	- 59	- 29	
18		-229	-105	- 53	- 70	-117	-234	+117	+533	+164	-258	-158	-240	-258	-135	0	+557	-223	+164	- 35	+158	- 59	+639	-199	+973	+ 39	
19		+211	-645	-117	-299	- 64	0	+ 29	-229	- 59	-211	-164	-240	-199	..	..	..	..	..	..	..	..	..	..	..	..
20		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	+188	+193	+ 64	+170	+129	+229	+234	+ 59	..
22	X	- 59	+ 12	+ 64	+105	+ 35	+170	+340	+463	+240	- 47	-299	-346	-340	-176	- 59	+105	+176	+223	+ 59	0	0	- 64	- 59	0	+ 23	
23		- 53	0	- 64	+ 64	- 70	+299	+363	+363	+ 64	-240	-293	-234	-164	-170	-105	0	+ 23	- 47	-182	-164	-100	-188	-129	-123	- 48	
24		-252	+246	+627	+1764	- 47	-117	+685	+1600	+732	+164	-305	-434	+158	+223	-111	+281	0	+398	+182	+158	-756	-100	-551	+ 93	+ 60	
25		-176	- 29	-738	0	+346	+164	+164	+ 70	+170	-246	-475	-410	-281	-123	+ 59	+105	+105	+ 64	+105	-100	- 59	-281	+188	-129	- 71	
26		-340	- 70	-650	+469	+100	+182	+352	+287	+176	-440	-645	-574	-246	-246	+ 59	+275	+293	+117	- 70	- 70	-176	- 82	-117	- 64	- 66	
27	X	-182	0	-117	-123	+ 47	+ 64	+182	+234	+ 64	-293	-475	-475	-305	-152	-170	0	+105	+141	+ 59	+105	+246	+141	-234	-229	- 57	
28		-164	-404	- 64	+123	+234	-117	+ 70	+223	+504	-422	-457	-533	-363	-287	-117	+105	-111	+604	+293	+ 93	0	-240	- 88	-105	- 51	
29	X	-170	- 59	- 59	-123	-111	- 47	+ 59	+111	+117	-100	-246	-369	-305	-287	-164	-129	- 88	+ 82	+177	- 88	- 12	0	- 59	-176	- 88	
30	X	-123	- 53	- 82	-117	- 59	0	+211	+299	+ 59	-164	-463	-305	-223	-229	-287	-164	-123	- 70	- 53	- 70	- 59	-105	-111	-117	-100	
MEANS	ALL DAYS	-148	- 21	- 83	+ 47	- 4	+ 20	+202	+238	+164	+165	-317	-300	-217	-147	-110	+ 34	+ 11	+104	+ 65	+ 11	- 32	- 31	-123	- 24	- 34	
MEANS	10 DAYS	-107	- 45	- 63	- 63	- 42	- 25	+166	+267	+ 87	-128	-290	-280	-207	-217	-169	- 83	- 3	+ 56	+ 24	0	- 23	- 20	- 41	- 69	- 53	

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

APRIL 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

APRIL 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										93.9 DIRECTION E 0.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		0	+ 81	+118	+ 50	- 25	+ 68	+ 99	+255	+323	- 25	- 56	- 68	- 25	-124	+112	-193	-236	+ 19	+174	+ 75	+130	0	-118	- 68	+ 24							
2		-410	+ 56	+130	- 12	+ 68	+186	+193	+348	- 62	-112	- 62	+186	+ 62	+193	+273	-199	- 62	-124	-130	+366	- 62	- 19	-317	+ 68	+ 23							
3	X	-161	- 50	- 31	+ 31	- 62	-242	- 31	+373	- 68	-155	- 75	- 56	+236	0	- 75	+ 12	+ 50	-112	+ 75	+ 62	-112	- 68	0	+ 81	- 16							
4	X	- 37	-180	-186	-106	0	+ 62	+186	+242	+130	+ 50	- 50	+124	+161	+ 75	-149	-180	- 50	-180	-166	- 62	- 99	0	+273	+ 25	- 6							
5	X	- 62	-130	- 68	0	0	- 50	+124	+211	+137	- 50	-124	+ 31	+130	+ 62	- 25	- 68	-180	-186	+ 50	+242	- 75	-304	-143	+199	- 12							
6	X	- 87	- 56	-112	- 19	-112	- 62	- 68	-124	-298	-354	-211	- 50	+186	+ 50	+224	+ 75	-242	-130	- 62	- 62	0	-124	- 62	-180	- 78							
7		-168	-255	-186	-553	+137	+304	- 62	+224	+ 62	-174	-130	- 25	+ 19	+478	+397	+236	+335	-683	-124	0	- 56	+ 62	-124	-211	- 21							
8		-130	+ 12	- 68	-205	- 50	- 50	+ 68	+261	0	-193	+ 68	- 99	-211	- 50	-130	+248	+317	- 50	-217	- 68	+193	-193	+174	+ 68	- 13							
9		-199	-428	- 62	+ 25	- 62	- 68	+180	+292	+ 62	-273	-317	0	+ 50	+168	- 56	+ 62	- 87	- 31	- 68	+ 62	+ 87	-217	-242	-528	- 69							
10		+217	+391	-130	-112	-168	- 50	- 62	+186	+428	-279	-130	+168	+391	+124	+248	+671	-161	-354	+174	-422	+ 81	-298	+ 75	-304	- 4							
11		-342	+671	-180	+124	+ 56	-112	+124	+161	- 56	-248	-180	- 56	+ 99	+273	- 68	+ 62	- 99	-112	+124	- 68	+ 62	+441	-677	+230	+ 10							
12		+ 56	-304	- 19	-199	+180	+261	+379	+317	+310	+304	- 62	+143	+199	- 25	- 50	-193	+ 37	+130	+ 37	+ 19	+ 62	+ 75	+106	0	+ 73							
13	X	- 37	+217	+180	+ 25	+161	+279	+323	+453	+317	+242	+ 31	+ 37	+ 62	-124	- 50	-186	-186	- 68	- 75	- 50	- 19	+ 68	+ 68	-168	+ 62							
14	X	+ 50	+ 68	+ 99	+112	+ 75	+ 50	+118	+248	+248	+317	+310	+155	- 81	-193	-292	-242	- 93	0	- 31	- 75	-186	- 99	0	+ 68	+ 20							
15		-112	-137	-112	- 43	- 81	-124	+ 99	+118	+149	+130	+180	0	-149	-124	-186	+255	-124	0	+534	-224	-199	- 62	- 25	- 19	- 11							
16		-118	-143	+112	+323	-447	+360	+112	- 62	+298	+273	+298	+112	-112	-317	-217	-130	-130	+ 99	+ 75	0	+ 87	- 12	-149	-162	+ 8							
17		+ 25	-248	- 56	0	- 50	-124	-118	+149	+193	+112	+248	- 43	-199	- 62	- 75	- 93	-118	+578	+118	-112	-323	- 50	-112	- 62	- 18							
18		-242	-112	- 43	- 81	-180	-124	- 25	+161	+ 68	- 93	- 68	-180	-199	-143	+248	+820	-428	+161	-112	+180	- 62	-118	+720	+1056	+ 50							
19		+211	-391	- 75	-317	- 68	-130	+ 75	-155	-186	-118	+174	+106	-248	-143	+106	-155	- 75	+ 75	0	-174	-124	-174	-130	-385	- 96							
20		-155	+149	+ 93	-130	-174	-118	+ 75	+236	+155	-335	-193	+174	+118	- 99	+112	+180	+186	-130	- 43	- 62	-186	- 62	- 50	-112	- 16							
21		-149	-273	- 68	-137	-137	- 37	+149	+112	+149	-124	-130	+ 50	- 93	-248	-298	- 62	- 12	+ 37	-124	+ 12	- 19	+124	-323	- 19	- 68							
22	X	- 25	-137	- 87	- 81	- 87	+ 62	+174	+261	+186	0	- 86	-177	-385	-171	-110	- 43	-128	+ 61	- 12	- 61	- 67	- 86	- 86	-110	- 50							
23		-122	- 73	-128	0	-134	+177	+110	+177	+110	-189	- 73	0	0	- 55	-134	- 49	-128	-171	-251	-147	- 92	-196	-196	-189	- 73							
24		-354	-428	+373	+1790	+330	- 86	+397	+149	+758	+324	+336	+220	+165	+452	-214	+122	+ 86	+220	-360	+562	-1033	0	-367	+269	+101							
25		-183	+ 67	-697	0	+232	+116	+306	+ 6	+360	-348	-263	-110	-110	- 79	+122	-110	+208	+ 86	-189	+ 12	+128	-697	+373	+ 92	- 28							
26		-196	+ 55	-336	+697	+257	+348	+428	+440	+452	0	-269	-306	-251	-159	+177	+434	+330	+ 92	-128	-171	-122	-116	0	- 61	+ 66							
27	X	-269	+ 98	0	- 61	+ 61	+159	+122	+232	+134	- 49	-128	-128	-183	-128	- 61	+ 67	+ 73	+ 49	- 49	+ 73	+244	+373	-232	-299	+ 4							
28		- 61	-373	- 49	- 67	+ 61	+ 18	- 73	+330	+525	-141	+ 55	-306	+ 67	- 98	+ 73	- 37	-251	+611	+550	- 55	-208	-440	-177	-110	- 6							
29	X	-275	+ 49	+ 61	- 67	- 86	- 86	- 61	+ 49	+116	+ 67	- 55	-183	-189	-116	- 49	-177	-110	+ 18	+ 55	- 67	+110	+ 49	-122	-214	- 53							
30	X	-183	0	- 67	-122	- 61	- 61	+ 73	+177	+122	+ 67	- 98	- 61	-128	-147	-189	-208	-189	-165	- 67	- 86	- 49	- 86	- 98	- 79	- 71							
MEANS		-117	- 60	- 53	+ 29	- 12	+ 31	+114	+151	+171	- 46	- 35	- 11	- 47	- 24	- 11	+ 31	- 49	- 9	- 9	- 10	- 64	- 74	- 65	- 40	- 9							
MEANS 10 DAYS		-109	- 12	- 21	- 29	- 11	+ 11	+ 96	+212	+102	+ 14	- 44	- 31	- 19	- 69	- 78	- 95	-106	- 71	- 30	- 9	- 25	- 28	- 40	- 81	- 20							

* = 10 LEAST DISTURBED DAYS

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-107	-66	-66	-60	-60	+24	+119	+399	-244	-167	-298	-280	+54	-12	0	+77	-60	+36	+54	0	+60	+256	-60	-167	-24
2	X	-60	-60	-119	-12	+48	0	+60	0	-167	-83	-364	-286	-179	-66	-292	-226	-18	-72	-12	0	+24	+167	-167	+60	-76
3		-54	-101	-167	-24	-30	+107	+60	+30	-137	-215	-238	-113	-60	+60	-54	-215	-197	-167	-60	-48	-209	0	+370	+250	-50
4		+215	-280	-352	-399	-113	+232	+77	-83	-119	-107	-244	-244	-143	+30	+167	-155	0	+179	0	-226	-95	0	0	-119	-74
5		-119	-286	+107	+113	+66	+119	+119	+179	-95	-188	-347	-282	-118	-47	-123	-65	-59	0	-47	-182	-129	-123	-76	-241	-76
6		+212	+118	+71	-47	-188	+223	+159	+76	+59	-65	-223	-294	-171	-100	-59	0	+59	+165	+171	+212	+223	+512	-59	-123	+39
7	X	-200	-270	-165	-117	-59	0	+123	+106	-41	-212	-359	-412	94	0	-59	-117	-123	-141	-106	-117	-117	-65	-106	-65	+193
8		-106	-71	-182	-306	+288	+294	+117	+176	+117	-165	-312	-347	-117	-123	+65	-59	-182	-171	+65	+112	+223	+300	-241	+335	-12
9	X	-212	-312	-123	-106	-47	-188	-53	+235	+94	-181	-515	-614	-410	-298	-170	+117	+70	+328	+292	-176	-58	-357	-58	-181	-122
10	X	-47	-64	-129	+64	+58	+123	+176	+234	+58	-287	-415	-526	-521	-374	-176	-23	+187	+304	+281	-117	-117	-64	-117	-176	-70
11	X	-64	-47	+58	-18	-58	-58	+105	+234	+240	+105	-298	-480	-363	-357	-170	-47	+117	+216	+164	-58	0	-58	-123	-117	-45
12		-117	-105	-70	-64	+58	0	+70	+292	+404	-18	-240	-410	-275	-263	-58	-35	+58	+76	+357	+88	-47	+12	0	+123	-7
13	X	-292	-47	-105	-129	+222	-41	-64	+64	+76	-123	-140	-164	-294	-82	-170	0	-117	-82	-64	-53	-35	-70	-70	-64	-74
14		-47	-111	-111	-105	-47	+58	+64	+117	-35	-105	-304	-304	-257	-187	-105	-176	+211	+433	-76	-164	-99	-70	0	-170	-66
15		-58	-53	-140	+18	+105	+158	+181	+105	+23	-181	-392	-298	-246	-105	+64	-234	-146	+76	+234	+64	+105	+58	-105	+199	-24
16		+29	-164	-58	-123	-199	+164	+298	+53	+222	-58	-181	-556	-328	-140	+29	+94	+123	+82	+105	0	+181	+1375	-117	-831	0
17		+948	-345	-398	-199	+240	+88	-94	+246	+322	+18	-181	-298	-234	-88	+99	-47	-170	0	+41	-76	+410	-404	-176	-117	-17
18	X	-193	-111	-117	-47	-58	+105	+164	+404	+64	-275	-562	-287	-105	0	+47	+47	-111	-58	0	+351	-199	-64	-140	-64	-50
19	X	-176	-18	-58	-18	+47	+105	+246	+316	+70	-281	-421	-486	-234	-117	0	0	-58	-123	-53	-18	-105	-94	-105	-47	-6

= 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0.5 N									
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN			
1	X	- 68	- 98	- 68	- 49	-184	- 49	+ 12	+197	-129	0	+111	+ 62	+252	+308	+166	+ 74	-111	- 55	- 37	+178	+178	+301	-105	-135	+ 31			
2	X	- 49	0	- 49	+123	+123	+129	+129	+ 62	- 62	+ 31	-123	-129	+ 74	+166	-184	-135	- 62	-143	- 49	+ 18	+ 49	+184	-129	- 18	- 2			
3		- 68	-123	- 86	+ 12	+ 37	+117	+ 49	- 12	-117	- 49	+ 12	+123	0	+184	+ 49	+ 98	-111	-178	- 49	- 62	-344	+ 62	+498	+517	+ 15			
4		+184	-289	-437	-320	-135	- 12	+105	0	-111	+ 18	+ 68	- 49	-160	+ 92	+123	-166	+ 62	+295	-129	-184	- 74	- 37	- 74	-191	- 59			
5		-111	-246	-148	0	- 18	- 62	- 25	+240	- 18	- 62	-180	-180	- 87	0	- 75	0	- 68	+ 62	- 75	-193	-106	-187	-193	-261	- 83			
6		+199	- 50	+106	+ 68	-243	+236	+106	+ 19	+118	+124	0	- 12	-124	-243	-131	- 56	- 62	+ 75	+124	+211	+255	+367	-112	-118	+ 36			
7	X	-311	-323	-118	-143	-100	-131	0	- 37	- 62	- 93	-168	-255	- 75	+ 56	0	- 68	- 68	-131	-112	-112	- 87	- 93	- 81	-112	-109			
8		-131	- 68	-280	-255	+187	+112	-149	+ 93	+ 56	+ 75	- 56	-236	+ 19	+ 50	+193	-317	-274	-243	0	+ 62	+299	+224	-367	+435	- 24			
9	X	-124	-317	- 50	-211	-137	-168	-118	+ 81	+162	-105	-248	-402	-248	-316	-198	+149	+186	+421	+260	0	-180	-396	-186	-149	- 96			
10	X	- 50	-124	- 74	- 50	+ 50	+105	- 56	-248	+ 62	-130	-223	-272	-365	-248	- 99	+ 50	+279	+340	+ 56	- 68	-111	- 56	-118	-180	- 43			
11	X	- 74	- 12	+ 6	- 56	- 12	-173	- 56	+ 99	+248	+192	-118	-210	-235	-241	-173	-130	+ 12	+ 62	- 37	- 62	- 62	-260	- 50	-118	- 61			
12		-192	-186	-173	-173	- 68	-124	-167	+ 50	+105	+ 18	0	-192	0	- 68	+198	+ 74	+ 74	+173	+310	- 56	0	-322	+ 43	+ 93	- 24			
13	X	-272	- 68	-285	- 80	+118	- 62	- 68	-130	-111	-118	+192	+241	+ 50	+180	+ 50	+130	- 80	-136	-118	- 62	- 74	- 19	- 50	+ 19	- 31			
14		- 56	- 74	- 74	- 50	- 68	+ 12	- 62	0	0	- 62	-180	-124	-149	- 12	+124	-180	+192	+433	-192	-136	-180	-180	- 12	-186	- 51			
15		-124	-124	-130	- 31	0	- 12	0	+ 50	- 12	-180	-167	+ 50	- 74	+ 62	+111	-173	- 6	+470	+ 99	-173	- 50	- 68	-130	0	- 26			
16		-149	- 74	- 62	- 37	-254	+ 50	+260	+ 87	+130	+ 19	-111	-310	-136	+ 62	+111	- 56	- 50	- 68	- 31	+ 43	+ 62	+879	-186	-173	- 3			
17		+774	-582	+118	-229	+ 62	0	0	+136	+149	+ 37	- 80	+ 19	+ 56	+ 62	+136	- 50	-186	- 56	- 25	-192	+210	-241	- 68	-136	- 4			
18	X	-161	-124	-124	- 68	- 62	+ 62	+ 50	+241	0	-272	-310	+ 62	+248	+130	0	-111	-180	- 50	-111	+ 12	- 50	- 74	-180	- 50	- 47			
19	X	-186	- 50	-105	- 62	- 62	- 19	+ 25	+ 74	0	-173	-180	-261	- 62	- 50	+ 75	+ 75	- 62	-131	- 87	- 75	-112	- 62	-131	-112	- 72			
20		- 75	- 62	-131	-112	-124	-156	+118	+218	0	-292	-211	-118	-137	- 62	+ 25	+124	+305	+ 12	-255	+112	-193	-249	+174	+211	- 37			
21		+187	+ 56	- 37	-205	-174	-162	- 62	-137	-168	-261	-305	-361	-771	+100	+759	+672	+560	+174	-124	+753	-180	+255	-174	-522	- 5			
22		-336	+ 56	-554	- 50	+299	-305	+112	- 44	+ 75	0	-230	-124	-311	+373	+ 68	-224	0	+131	-112	- 12	+236	-323	+ 44	-311	- 64			
23		+118	-694	+ 87	+292	- 75	+149	+124	+ 68	+236	+292	- 56	+ 75	-193	+ 75	+193	+112	-112	+118	+442	+ 50	-330	- 62	+199	+355	+ 61			
24		+100	-243	-566	-180	- 37	-274	+236	-162	+ 87	+ 75	+ 93	-187	-404	+137	- 62	-199	+249	+174	+ 62	+ 50	-131	-255	-243	- 62	- 73			
25		-199	-131	-118	+ 50	+ 87	+131	-112	+149	- 25	- 56	-218	-131	-168	0	+305	+112	0	+187	-137	-193	-174	- 87	-137	-187	- 44			
26		+180	0	-174	- 62	+ 50	- 68	+168	+224	+ 50	-193	-261	-373	-280	-386	- 56	+386	+236	+131	+ 62	-193	- 56	-187	+ 37	-149	- 38			
27	X	-236	+112	-137	-174	+ 62	- 87	+112	+118	+ 62	- 62	-379	-417	-336	- 93	+249	+317	+149	+236	- 68	-118	- 62	-112	-180	-236	- 53			
28		+ 56	+124	+ 75	-124	-118	-193	- 12	+118	+180	- 50	-205	-330	-255	-118	-162	+348	+255	+ 50	+187	-236	+ 31	+261	+ 81	- 56	- 4			
29		-404	- 81	-149	-224	-187	- 87	- 12	+ 68	-124	-180	0	-274	-137	- 12	+336	+236	+ 50	- 81	-112	-367	- 87	-149	-118	-162	- 94			
30		-193	-224	-224	-118	- 50	-100	-106	+ 68	- 93	-274	+273	-159	+ 32	-133	+ 64	+121	+127	+190	+489	+311	-279	-356	-210	- 89	- 39			
31		- 38	-171	-197	-203	-133	0	+216	+387	- 6	- 76	-127	+114	-330	-381	+ 70	+ 51	- 32	+248	-286	- 83	+133	+318	+ 70	- 13	- 20			
MEANS ALL DAYS		- 58	-135	-134	- 88	- 38	- 37	+ 26	+ 83	+ 22	- 58	-109	-141	-139	- 11	+ 73	+ 34	+ 41	+ 87	- 2	- 28	- 47	- 30	- 67	- 68	- 34			
MEANS 10 DAYS		-153	-100	-100	- 77	- 20	- 39	+ 3	+ 95	+ 17	- 73	-145	-158	- 70	- 11	- 11	+ 35	+ 6	+ 41	- 30	- 29	- 51	- 59	-121	-109	- 48			
		# = 10 LEAST DISTURBED DAYS																											

* = 10 LEAST DISTURBED DAYS

TABLE 281
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1941
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
JUNE 1941

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-367	+36	+120	+24	+60	+187	+169	+199	+36	-30	-235	-229	-66	-114	-229	-126	-24	+72	-24	-12	+66	+60	-30	-126	-22
2	X	-108	-84	-66	-48	-18	+60	+235	+295	-108	-259	-249	-361	-355	-193	-66	+72	+60	-60	-163	0	0	-72	-60	-72	-72
3	X	-114	+60	+60	0	+108	+144	+181	+241	-120	-361	-307	-241	-150	-229	-187	-60	+60	+60	+48	-48	-60	-66	-108	-48	-48
4	X	-72	0	-54	0	-36	+60	+120	+229	+193	-205	-476	-554	-301	-181	-36	+120	0	-66	-48	-66	-66	-48	+90	+211	-49
5	X	+169	0	+72	+132	-48	-96	+72	+90	-66	-181	-355	-421	-373	-187	-12	+313	+235	+144	+54	-187	-132	0	-90	-48	-38
6		-66	+48	+187	+445	+60	+120	+385	-199	-187	-361	-542	-668	-433	-60	+108	+367	+1035	+777	+662	+771	+60	0	+60	+54	..
7	X	+24	+36	+60	+90	+96	+144	+295	+289	+54	-355	-427	-433	-265	-60	+126	+235	+108	0	0	0	-66	-48	-108	-84	-12
8	X	-66	+48	-72	0	-126	+84	+205	+241	+120	-349	-590	-524	-307	-175	+169	+241	+175	-72	-241	-120	-175	-289	-144	-283	-94
9		-126	-48	-445	+439	+217	+277	+235	+524	+78	-241	-777	-783	-427	-205	+181	+313	+144	+223	+60	-132	-229	-78	+241	+837	+12
10		+181	-60	-445	-289	+48	+235	-50	-163	+560	-452	-452	-415	-488	-265	+96	+337	+229	-427	-126	+18	+120	+90	+12	+193	-62
11		+78	+144	+54	+60	-144	+30	+108	+169	+84	-138	-542	-650	-355	-60	+126	+60	+66	+229	+90	+181	+18	-144	-48	-217	-36
12		+126	-409	+66	0	0	+90	-66	+241	+169	-66	-229	-102	-421	-482	-355	-150	+72	+72	+126	-12	-301	-295	+265	+536	-47
13		+734	-241	+307	+265	-72	-211	-289	+361	+175	+48	-36	-427	-482	-211	-367	+48	+163	+632	+169	+235	-253	-373	+60	-307	-3
14		-193	-90	0	-54	+66	+48	+114	+90	0	-48	-150	-409	-301	-361	-289	0	+54	-48	-60	+247	+169	+102	+187	+229	-29
15		+229	-452	+66	-102	-66	-114	+72	+66	+169	+66	-72	-349	-403	-536	-241	0	+30	+60	-54	-66	+60	+90	0	+126	-59
16		-235	+169	+169	+217	+235	+289	+307	+325	+102	-90	-169	-187	-241	-241	-229	-72	+903	+169	+60	+662	+175	-60	-36	-48	..
17		-289	-217	+391	+229	-72	+247	+289	+126	+361	+72	-433	-464	-84	-72	+60	+90	+132	+722	+349	+361	+66	+126	-289	-211	+55
18		-181	-241	-84	+60	+48	+66	+211	+241	-108	-241	-530	-518	-506	-464	-84	+114	+241	+66	-126	-247	-175	-193	-108	-126	-120
19		-108	-108	-48	-66	-187	+169	+187	+108	-241	-313	-331	-421	-169	+24	+60	+169	-54	+193	-84	-60	+241	-289	+403	-261	-54
20		+656	-60	-307	-72	-115	+102	+132	+157	+66	-241	-435	-578	-476	-253	-150	-96	+542	-30	+66	+138	-367	+114	-120	-241	-48
21		+48	-72	-241	-235	+187	+301	+301	+126	-211	-506	-494	-476	-295	-223	-12	+48	+72	+319	+36	-175	-169	-12	-78	-150	-80
22		-144	+102	-482	+397	+108	+126	+241	+48	+120	-30	-506	-710	-427	-187	+60	+361	+241	+181	+187	-60	-48	-108	-54	-24	-25
23	X	+30	+54	+66	0	+169	+181	+295	+307	+66	-265	-542	-349	-265	-355	-193	+157	+169	+301	+144	+60	-60	0	0	+48	+1
24		-18	+66	+120	-66	+385	+138	+373	+108	+144	-84	-482	-500	-313	-205	-108	+60	+307	+48	-163	-187	-60	-126	-78	-60	-29
25	X	-12	-66	0	-78	+42	+90	+126	+175	+72	-66	-433	-789	-608	-433	-132	-90	+271	+355	+150	-84	-120	+12	-54	-72	-73
26		-18	-42	-126	+102	+60	+126	+265	+295	+120	-126	-530	-849	-662	-476	-283	+150	+108	-30	+36	-175	+66	+433	+247	-30	-55
27		+48	-205	+66	+253	+187	+169	+84	-54	+175	-48	-319	-518	-319	-175	-120	-60	+108	+102	+157	-241	-187	-120	0	-96	-46
28	X	-193	-108	-283	+187	+181	+241	+295	+120	+66	-235	-307	-319	-361	-187	-187	+96	+18	+319	+60	-144	-120	-229	-72	-199	-57
29		+126	-54	-96	+108	0	+114	+114	+181	+205	+84	-108	-289	-253	-150	-66	-42	-181	0	-24	+108	-30	0	-54	+12	-12
30		+48	+108	-48	-150	+241	+84	+301	+319	+120	-271	-494	-512	-409	-223	-60	+60	+84	+181	+181	+277	+367	+217	+49	-175	+12
MEANS ALL DAYS		+17	-68	-48	+42	+45	+108	+166	+183	+84	-173	-391	-471	-351	-237	-82	+80	+123	+127	+28	-14	-52	-44	+2	-20	-40
MEANS 10 DAYS		-71	-2	-10	+31	+43	+110	+199	+219	+37	-231	-402	-422	-305	-211	-75	+95	+107	+105	-3	-60	-73	-68	-58	-67	-46

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JUNE 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0° 5 N									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	-444	+25	+63	-120	-133	-19	-70	0	-51	-25	+63	-114	0	-57	-241	-165	-139	+51	-63	-114	0	0	-51	-120	-72					
2	X	-133	-114	-70	-63	-13	-13	+133	+127	-51	-152	-120	-209	-260	-165	-120	-44	-13	-120	-133	-63	-57	-101	-63	-101	-80					
3	X	-127	+70	-63	0	0	-89	+63	+178	-63	-190	-114	0	-63	-171	-178	-89	+51	+76	+114	-13	-95	-82	-89	-38	-38					
4	X	-63	-63	-127	-70	-127	-51	-13	+127	+152	-133	-254	-368	-152	-63	0	0	-127	-127	0	0	-13	-51	+63	+247	-51					
5	X	+89	-70	-51	-57	-133	-190	-63	0	-178	-127	-152	-89	-178	-19	+51	+101	+114	+108	+76	-209	-165	-120	-133	-184	-66					
6		-178	-63	+139	+209	-19	+25	+190	-311	-127	-76	-260	-444	-266	-51	-70	+139	+190	+76	+25	0	0	-51	-13	-127	-44					
7	X	-190	-63	-57	-70	-38	-101	+51	+127	+57	-171	-311	-247	-139	-63	+70	+158	+51	-51	-51	-63	-63	-76	-63	-63	-57					
8	X	-51	+63	-178	-51	-190	-70	+63	+260	-95	-254	-304	-247	-139	-44	+190	+247	+139	-108	-266	-178	-133	-247	-171	-298	-86					
9		-184	-114	-596	+108	-89	+120	+216	+273	+304	0	-368	-380	-266	-120	+298	+393	+101	+127	+190	-70	-203	-89	+133	+456	+10					
10		+254	-13	-374	-304	+25	+25	-647	-387	+571	-298	-133	-178	-120	+114	+254	+469	+228	-520	-57	+114	+209	+51	+63	+304	-15					
11		+63	+133	+32	0	-76	-184	-63	+25	+114	-152	-285	-241	+32	+133	+203	-32	-51	+70	+82	+133	0	-273	+70	-197	-19					
12		+70	-425	+13	-51	-120	-70	-184	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19		-127	-89	-25	-133	-165	+13	0	+19	-190	-171	-216	-133	-13	+197	+311	+380	-57	+279	-197	+89	+165	-178	+254	-628	-26					
20		+748	+127	-114	-19	-197	-63	-63	+190	+89	-114	-184	-203	-127	-19	-63	+63	+450	+51	-38	-152	-95	+51	-63	-317	-3					
21		+158	+13	-254	-63	+63	+89	+260	+241	0	-158	-254	-139	+76	-197	-13	+57	+44	+285	+108	-133	-114	+44	-32	-323	-10					
22		-152	+190	-247	+247	0	0	+63	+44	+247	+152	-203	-368	-260	-139	+114	+254	+158	+178	-63	-63	-133	-203	-63	-95	-14					
23	X	-70	-114	-38	-127	0	-63	+63	-6	-83	-159	-229	-32	0	-248	-114	+64	+32	+178	+64	-57	-70	-19	-57	+13	-45					
24		-140	0	0	-210	+260	0	+133	0	0	0	-248	-254	-32	+203	+51	+184	+324	-76	-165	-133	-95	-121	-114	-70	-21					
25	X	-13	-76	+13	-64	-13	0	+19	+57	-44	-121	-260	-502	-349	-190	+121	+127	+387	+457	+70	-70	+64	+102	-57	-121	-19					
26		-64	-114	-203	-25	-70	-76	+13	+70	+127	-133	-318	-514	-267	-121	+127	+375	+146	+64	+114	-184	-19	-78	+432	+76	-27					
27		-698	-337	0	+248	+114	+64	-70	+64	+102	-70	-127	-394	-171	+127	+121	+32	+216	+190	+178	-235	-222	-114	-57	-171	-50					
28	X	-235	-64	-248	+197	+57	+64	+76	+51	-44	-260	-127	-133	-95	+57	+64	+133	+70	+190	0	-70	-89	-305	-203	-305	-56					
29		-121	-121	-203	+127	-184	+70	0	+13	+57	-140	0	+114	+76	+152	+51	-13	-197	-76	-114	+76	-57	-70	-197	-114	-36					
30		-51	0	-64	-152	+121	-64	+76	0	-38	-241	-190	-229	-133	+64	+133	+64	+89	+178	+203	+311	-254	+133	+248	-203	0					
MEANS ALL DAYS		-75	-35	-116	-17	-35	-22	+17	+51	+37	-130	-200	-231	-124	-27	+54	+126	+96	+64	+3	-47	-63	-78	-7	-103	-36					
MEANS 10 DAYS		-124	-41	-76	-42	-59	-53	+32	+96	-40	-159	-181	-194	-138	-96	-28	+53	+56	+65	-19	-84	-62	-90	-82	-97	-57					

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT		NORTH			LINE			OM			LENGTH IN KMS			58.4			DIRECTION			N 17° 8' E						
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		- 54	+198	-114	+ 12	+ 18	-114	+144	+186	+ 78	- 72	-180	-180	-294	-282	-307	+ 60	+186	+240	+367	+319	-252	- 66	+ 60	+114	+ 3
2		-367	+288	0	-120	- 66	-114	- 18	+228	+ 30	-102	-361	-529	-607	-361	- 72	+114	+180	+186	-120	-144	-252	- 84	-186	- 60	-106
3		- 24	+ 36	-192	-108	- 66	-240	+300	+385	+213	- 72	-805	-541	-421	-246	+ 48	+ 72	+ 90	+192	+ 72	+ 60	-577	+240	+829	- 48	- 29
4		+397	-258	-276	-228	-294	+ 60	+234	+168	+361	- 60	-367	+ 66	-144	-228	+162	+ 60	- 12	+481	+186	+583	+403	-775	+733	+1232	+ 40
5		..	..	..	..	..	..	..	..	-433	+361	-487	+1016	-1082	-523	-288	-547	-186	- 48	+ 72	- 66	-180	0	- 48	-108	..
6		-252	-240	-120	-325	-427	+ 84	+186	+ 72	+685	-240	-186	-174	-505	-415	- 66	+120	+126	+421	+721	+637	-186	+493	-204	-499	- 12
7		-1034	+300	-337	+192	-204	+132	+252	+ 72	-120	-511	-475	-565	-481	- 60	+246	+288	+ 12	- 24	+ 60	- 54	- 84	- 12	+ 42	-180	-106
8		+427	-204	+130	+ 60	- 18	+138	+294	+403	+198	-481	-541	-475	-325	-361	-174	+126	+300	+288	+ 72	-108	+ 12	- 12	-108	- 54	- 15
9		- 18	0	- 54	+126	+ 48	+114	+307	+228	+415	-313	-673	-865	-673	-475	-325	+108	+397	+451	-132	-126	+337	- 60	-168	-192	- 64
10		-349	+126	+186	+108	+150	+216	+337	+385	+294	-108	-968	-793	-469	- 54	+108	+264	+156	+114	0	- 60	- 60	-126	-228	+180	- 25
11		+270	- 72	-174	-313	+ 60	+126	+240	+192	+198	- 60	-415	-535	-307	-288	-168	0	+228	+126	0	+ 60	- 78	-126	- 48	+168	- 38
12		+150	+ 66	- 66	+ 66	+168	-529	- 66	+228	+252	0	-433	-547	-493	-319	-240	- 54	+168	+186	+ 48	+ 48	- 54	- 12	+ 12	+ 78	- 56
13	X	+ 60	+126	+288	+ 66	+246	0	+168	+180	+288	0	-397	-599	-361	-409	-252	0	+180	+168	+102	- 12	- 48	0	+ 66	-210	- 14
14	X	0	- 66	0	- 72	- 18	+102	+174	+240	+ 96	-174	-421	-607	-631	-307	+ 54	+120	+186	+132	+ 60	- 48	0	+120	+ 36	0	- 43
15	X	+ 60	-108	- 66	+ 60	- 42	-108	+240	+192	+ 60	-307	-835	-589	-180	-108	0	0	+168	+132	- 60	- 18	- 60	-300	+114	0	- 73
16		- 90	+174	- 66	+240	+ 60	+126	- 66	+ 90	+228	- 60	-252	-541	-421	-535	-240	+120	+367	+541	-120	0	-120	+168	- 66	+126	- 14
17		-120	- 66	+246	+ 48	+ 48	+126	+178	+367	- 60	-373	-186	-282	-180	- 48	0	+168	..	..	..	..	..	- 66	- 48	+ 12	..
18	X	0	+ 24	- 48	+ 60	+ 66	+186	+313	+361	+288	-234	-553	-487	-367	0	- 12	+337	+ 54	- 72	-186	+252	-144	-114	-180	- 66	- 22
19	X	- 72	- 60	0	- 36	+ 90	+ 60	+240	+288	+ 24	-565	-968	-823	-150	+ 60	0	+288	+174	+180	-168	-174	-144	-192	+ 66	-132	- 84
20		0	+ 54	+120	- 66	+192	+114	+234	+144	- 30	-331	-385	-547	-589	-102	-240	+102	+ 84	+132	- 60	+192	- 84	-126	+1274	+445	+ 22
21		-120	-210	+865	+307	-361	-234	+433	+337	+288	-168	-421	-385	-252	-162	-294	-126	0	..	..	..	..	..	..	..	..
22		-397	-108	+ 66	+126	+ 60	+216	+228	+264	+216	+ 66	-252	-529	-631	-649	-313	+ 66	+288	+288	+481	- 12	+361	-373	+ 72	-487	- 40
23		0	-541	- 66	+ 72	-120	+288	+547	+517	+427	- 66	-373	-661	-529	-361	-294	- 48	+102	+180	-186	-186	-120	- 90	-264	-114	- 79
24		-192	-180	-433	+180	+192	+180	+361	+270	0	- 66	-433	-775	-559	-355	-168	+192	+367	+198	- 60	-313	-240	-325	-114	+240	- 85
25	X	+150	- 60	+ 60	-168	+234	+186	+270	+475	+ 12	-409	-721	-589	-367	-324	-228	+138	+234	+168	0	-108	- 60	-108	-180	-168	- 61
26	X	-234	-168	-114	- 60	0	+120	+228	+547	+421	-186	-481	-655	-793	-721	-288	+120	+325	+307	+180	+ 12	+ 84	+126	+ 54	0	- 49
27	X	- 72	+ 96	+ 48	+ 60	+ 60	+168	+415	+487	+294	-234	-373	-727	-883	-571	-240	+ 84	+403	+421	+168	0	+ 12	+ 60	- 60	+ 66	- 14
28	X	-120	-126	-108	- 60	-144	+108	+240	+385	+216	-276	-835	-787	-405	-307	- 60	+120	+270	- 12	-108	-120	0	-108	- 84	-120	-103
29	X	- 12	- 54	-144	- 18	- 12	+ 90	+174	+168	+ 24	-294	-331	-367	-319	-355	-234	- 60	+204	+168	-174	-126	- 72	0	+108	+ 48	- 65
30		-174	-192	+ 72	- 12	- 12	0	+270	+349	0	-288	-433	-463	-535	-421	+120	+ 60	0	+ 48	-126	-126	- 66	- 48	- 48	0	- 84
31		+ 18	- 96	-108	- 60	- 60	+126	+282	+108	- 60	-258	-481	-385	-355	- 78	- 48	+391	+228	+102	-108	-186	- 84	-126	- 54	+ 48	- 52
MEANS ALL DAYS		- 69	- 37	- 52	- 8	+ 6	+ 66	+233	+272	+186	-204	-497	-545	-458	-305	-115	+114	+195	+205	+ 32	+ 9	- 37	- 70	- 2	+ 15	- 45
MEANS 0 DAYS		- 24	- 40	- 8	- 17	+ 48	+ 91	+246	+332	+172	-268	-592	-622	-450	-295	-126	+115	+220	+159	- 19	- 34	- 46	- 52	- 6	- 52	- 53

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		-50	+132	-119	-88	-119	-251	-126	-63	-119	-88	-63	-94	-13	-69	-176	+113	+170	+88	+201	-119	-126	-57	0	+38	-42					
2		-377	+144	+113	-63	-75	-132	-119	0	-50	-69	-220	-251	-239	-69	+176	+188	+132	+132	-245	-188	-314	-113	-188	-119	-81					
3		-126	+13	-251	-88	-182	-389	+188	+195	+270	+75	-383	-188	-113	+82	+251	+38	-100	-63	-69	-63	-598	+188	+691	+201	-18					
4		+226	-176	-132	-188	-113	-176	-126	+69	+201	+264	+50	+377	+126	-176	+251	-126	-113	+917	-119	+377	+565	-559	-546	+382	+94					
5		..	..	..	..	..	..	..	..	-276	+188	-521	-553	-816	-264	-816	-873	-283	-138	-38	-13	-94	-50	-188	-264	..
6		-352	-113	-295	-320	-515	-69	+126	+308	+678	-251	+188	+69	-578	-301	-251	+132	-553	+515	+207	+314	-119	+867	+176	-904	-43					
7		-597	-289	+126	+144	-157	-151	0	-82	-182	-251	-339	-446	-371	+63	+308	+188	-138	+50	-13	-94	-170	-113	-132	-308	-123					
8		+308	+132	+132	+63	-50	-63	+239	+182	+100	-251	-320	-245	-188	-301	-126	+63	+119	+126	-94	-188	-69	-126	-113	-113	-33					
9		-126	-50	-132	-50	-113	-69	+126	+113	+201	-245	-320	-465	-408	-226	+188	+113	+358	+214	-195	+82	+119	-63	-188	-126	-53					
10		-289	+176	+132	+126	+18	+126	+201	+239	+301	+126	-264	-301	+69	+239	+100	+327	-301	-201	-220	-75	-182	-201	-301	+126	-1					
11		-251	+126	-63	-207	+63	-63	+113	+44	+94	-126	-301	-333	-100	-157	-119	+75	+195	+126	0	+75	-144	-126	-69	-182	-55					
12		+188	+232	-50	-69	+119	-245	-301	-44	+44	+63	-176	-257	-144	-63	-119	-50	0	+75	-75	-63	-113	-113	-75	0	-52					
13	X	-69	+63	+132	-50	+132	-75	-13	+38	+220	+50	-251	-308	-163	-201	-132	-75	+69	-50	-57	-69	-63	-38	-75	-119	-46					
14	X	+13	-63	-50	-113	-100	+13	-57	+63	+50	-144	-195	-251	-264	-57	+100	0	+69	+31	0	-25	-57	+69	0	-119	-45					
15	X	+94	-138	-100	+19	-113	-119	+69	+50	+57	-170	-565	-371	-50	+107	+226	+113	+132	-63	-201	-107	+119	-377	+6	-94	-62					
16		-195	+126	-188	+69	+63	-69	-261	-100	+151	+69	+226	-75	-132	-264	-63	+371	+528	+188	-113	-107	-170	-31	+63	+50	+6					
17		-176	-163	+176	-25	-57	-50	+13	+245	-50	-257	-13	-63	-126	-63	+75	0	..	..	..	..	..	+13	+82	+113	..
18	X	+50	+63	-119	+126	+63	+63	+163	+251	+182	-201	-264	-188	-69	+245	+151	+377	+50	-88	-220	+308	+13	-82	-57	-69	+31					
19	X	-75	-57	0	-57	+119	+88	+170	+333	+251	-308	-502	-615	+13	+301	+226	+402	+182	+283	-138	-113	-69	-301	+358	-69	+18					
20		+132	-113	+239	-69	+132	-38	+100	+75	+50	-63	-63	-195	-251	+264	-176	-63	-100	+69	-69	+75	+182	-50	+936	+333	+56					
21		+314	+301	+251	+251	+75	+50	+245	+239	+195	+113	+132	+151	+239	-188	-427	-214	+63	-88	+388	-251	+188	-465	-63	+113	+67					
22		-207	-113	+57	0	+75	+170	+201	+188	+214	+126	-63	-151	-295	-320	-75	+126	+257	+301	+502	+94	-100	+50	-125	-270	+27					
23		+201	-119	+19	+94	+226	+314	+427	+339	+364	+201	+63	-188	-182	-195	+63	+75	+339	+245	-94	-207	-182	-69	-226	+75	+66					
24		-151	-113	-327	+50	+176	+126	+308	+170	+119	+119	-126	-389	-245	-50	+100	+264	+377	+113	-69	-201	-163	-314	-163	+94	-12					
25	X	+257	+207	+257	+69	+301	+194	+201	+320	+69	-182	-352	-195	-126	-50	+94	+251	+195	+151	+63	-50	+69	+50	-50	-69	+70					
26	X	-126	-151	0	0	-50	+119	+182	+371	+427	+63	-113	-339	-496	-239	-75	+50	+188	+126	+69	-59	+50	+170	0	0	+7					
27	X	-126	+31	0	-13	-13	-57	+176	+264	+264	-63	-132	-301	-528	-377	-126	+126	+245	+251	+132	-69	-50	+50	-57	+138	-10					
28	X	-25	-75	-88	-57	-75	-100	-63	+264	+301	-69	-433	-433	-151	-13	+138	+176	+289	-13	-182	-113	-107	-75	-63	-132	-46					
29	X	-50	-107	-126	-44	-75	+50	+50	-132	-88	-301	-63	+50	0	-176	-94	-69	+188	+188	-13	-57	0	+119	+144	+88	-13					
30		-163	-257	+119	+50	-50	-94	+188	+314	+126	-75	-63	-113	-257	-295	+126	+75	0	-50	-195	-13	-63	0	-50	-63	-33					
31		-31	-138	-126	-13	-69	-113	+138	+132	-38	-107	-182	-119	-132	-126	+195	+615	+126	0	-113	-226	-113	-151	-63	-19	-18					
MEANS		55	-11	-22	-15	-11	-33	+88	+152	+154	-58	-176	-213	-140	-81	+25	+126	+102	+123	+32	-39	-57	-64	-8	-5	-12					
ALL DAYS																															
MEANS		6	-23	-14	-12	+19	+18	+88	+209	+173	-132	-287	-295	-183	-46	+51	+135	+161	+82	-55	-36	-10	-42	+21	-44	-10					
10 DAYS																															

≡10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 285

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		NORTHERLY					LINE					OM					58.4					58.4										
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		- 60	+302	+115	-133	-127	+ 66	+422	+651	+ 48	-229	-591	-663	-712	-368	+ 72	+187	+675	+295	- 12	+549	-404	+127	+ 24	-422	- 8						
2		+573	+ 60	+386	-283	-302	+428	+302	-283	- 72	-289	- 54	-344	-374	-139	- 12	+356	- 18	+ 72	-127	-175	- 66	-217	+416	-145	-13						
3		+163	+103	- 48	-295	+ 72	+187	+289	+338	+295	-127	-603	-669	-362	- 66	+211	+289	+265	+139	+229	-525	+302	+428	+796	+362	- 74						
4		-295	-121	+422	+458	-199	-127	+579	+1296	-308	-525	-446	-109	+181	+289	+133	+ 66	+241	+651	+235	-277	-603	-669	-374	-175	- 95						
5		- 60	- 72	- 36	- 48	- 90	+ 66	+314	+169	-241	-645	-669	-603	-421	- 96	+ 12	+ 78	+247	+163	- 66	-121	- 72	-169	- 66	-169	-108						
6		+241	+ 66	-163	0	+133	+109	+308	+531	+181	-537	-488	-410	-543	-302	+187	-295	+724	+302	+ 66	-127	-253	-181	-193	-308	- 40						
7		-241	-295	+157	+229	-241	+362	+482	+241	+217	- 72	-422	-724	-543	-434	+ 60	+109	+ 66	..	..	..	..	..	..	..	..
8		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10		..	..	..	..	..	..	..	..	+289	-127	-531	-748	-663	-428	-283	-181	+ 96	+199	+187	+ 72	+ 60	+ 12	0	+ 78	..
11	X	-127	-127	+181	0	+109	+187	+205	+326	+368	-181	-428	-494	-476	-488	-308	- 12	+133	+145	+ 12	+ 96	- 60	- 48	+ 96	- 54	- 39						
12	X	- 66	0	+ 66	-139	+ 72	+235	+187	+374	+368	-181	-567	-482	-350	-265	+ 42	+ 54	-103	0	+ 60	+ 48	- 24	- 48	- 60	+ 72	- 29						
13		+ 54	-109	-326	+109	+241	+ 48	+217	+235	+109	-428	-235	-368	-302	-175	-169	+ 60	+ 66	+ 72	+109	- 72	+289	+181	- 60	- 66	- 24						
14	X	- 84	- 60	- 60	- 60	+ 12	+ 66	+157	+308	+229	- 90	-295	-314	-121	+145	+ 72	+ 96	- 48	-127	+ 66	- 72	- 18	+ 66	+ 60	- 12	- 4						
15	X	+ 18	- 66	0	0	- 66	+ 66	+109	+235	+ 42	-265	-422	-410	-368	-193	+ 72	+109	+ 49	+ 60	- 12	- 54	- 48	- 54	0	- 24	- 51						
16	X	0	- 12	- 48	- 60	+ 66	- 54	+289	+295	+115	-338	-410	-217	-368	-187	-193	+ 36	- 72	-145	0	0	+ 96	- 12	- 54	- 54	- 54						
17	X	+ 36	- 12	+ 12	0	- 18	+ 72	+247	+175	-127	-482	-591	-356	-241	-127	+ 60	+121	+103	0	-109	- 66	-109	- 48	- 66	- 48	- 66						
18		+ 24	0	- 48	- 54	+ 60	+ 72	+362	+302	-145	-669	-663	-350	- 60	- 48	+ 78	+127	-145	-253	-109	+814	-127	- 60	+ 60	- 48	- 37						
19		-127	-193	-103	- 72	-302	+681	+434	+247	+482	-157	-368	-651	-482	-187	0	+169	+295	+109	+181	-175	-121	- 72	0	- 66	- 20						
20	X	-133	-115	+ 60	+ 60	+ 12	+115	+410	+428	+169	-295	-531	-657	-591	-422	- 60	+241	+241	+217	-169	- 60	+133	-121	+169	+ 60	- 35						
21	X	- 48	-181	+ 72	- 54	0	+109	+428	+657	+217	-193	-868	-820	-271	-428	-175	+169	+362	+115	-145	-145	-115	- 72	- 96	- 60	- 64						
22	X	- 60	- 54	- 24	+ 60	+ 54	+169	+374	+537	+241	-289	-718	-844	-585	-181	+235	+308	+362	+ 96	-145	-109	- 48	- 66	-115	-109	- 38						
23	X	-127	- 12	+ 60	+109	+115	+175	+428	+531	+ 60	-543	-856	-742	-470	-235	-127	+193	+308	+241	+ 18	- 60	- 66	+127	+187	+ 48	- 27						
24		+ 48	-295	-133	+253	+109	+181	+295	+736	+302	-302	-706	-760	-657	-446	-175	+199	+416	+229	+115	- 48	0	- 60	- 48	- 60	- 34						
25		- 54	- 72	0	+109	+ 60	+ 78	+362	+295	- 18	-283	-336	-356	-139	-283	+ 48	- 60	+ 66	+374	-109	+ 48	+ 48	+121	+193	+ 48	+ 4						
26		-121	+ 66	+145	-181	-235	+241	+302	+338	+308	+ 66	-579	-519	-645	-193	- 66	+229	+259	+911	+965	-537	-187	+217	-326	+295	+ 31						
27		-326	+615	-904	-374	-398	+205	+513	-386	+464	+519	+ 60	-127	-241	-350	- 72	+199	- 12	+295	-289	+ 6	+133	-169	-241	- 66	- 37						
28		-724	+181	+247	-416	+241	+253	-241	+410	+253	+115	-223	-320	-633	-482	-229	- 66	+205	+241	+ 54	0	+169	+193	+ 18	-235	- 41						
29		-555	- 78	-633	+199	+199	+ 60	-253	+482	+181	+241	+ 54	-362	-241	-193	+ 18	+ 48	+513	+651	-187	- 66	0	-416	- 36	-410	- 33						
30		-277	- 18	-127	+295	-157	-133	+380	+241	-109	-356	-283	-229	-121	-175	+ 60	0	+ 66	- 54	-127	- 60	+ 42	-193	-289	+302	- 55						
31		- 60	- 72	+ 54	+133	- 78	+175	+205	+482	+295	- 48	-302	-386	-651	-326	-241	-181	- 96	+109	+121	- 66	-115	- 12	+ 96	-567	- 64						
MEANS		- 80	- 10	- 31	- 14	- 15	+138	+282	+273	+134	-241	-453	-465	-379	-219	- 20	+101	+189	+182	+ 23	- 44	- 45	+ 45	+ 3	- 70	- 34						
ALL DAYS		- 59	- 64	+ 32	- 8	+ 36	+114	+283	+387	+168	-286	-569	-534	-384	-238	- 38	+132	+134	+ 60	- 42	- 42	- 26	+ 28	+ 12	- 15	- 41						
MEANS		- 59	- 64	+ 32	- 8	+ 36	+114	+283	+387	+168	-286	-569	-534	-384	-238	- 38	+132	+134	+ 60	- 42	- 42	- 26	+ 28	+ 12	- 15	- 41						
10 DAYS		- 59	- 64	+ 32	- 8	+ 36	+114	+283	+387	+168	-286	-569	-534	-384	-238	- 38	+132	+134	+ 60	- 42	- 42	- 26	+ 28	+ 12	- 15	- 41						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0° 5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-133	+176	+113	-133	-183	-113	+189	+454	+101	0	-195	-391	-592	-50	+145	+239	+806	+202	+126	+189	-202	+189	-277	-737	-3						
2		+939	+113	+246	-202	-202	+164	+246	+290	-69	+32	+120	-246	-246	-76	+76	+220	0	0	-133	-88	-220	-277	+69	+82	+35						
3		+139	+50	+63	-302	-63	-76	+94	+132	+334	+158	-258	-479	-189	-50	+277	+63	+164	+126	+145	-529	+113	-926	+1380	+788	+48						
4		-428	0	+731	-126	+435	-195	+662	+781	+94	+94	-133	-139	+479	+901	-101	-158	-176	-220	+800	-176	-674	-517	-302	2079	-19						
5		-176	0	+50	+63	-113	+57	+220	+321	0	-277	-441	-504	-258	+13	+38	+57	+208	+63	-32	-63	0	-50	-50	-365	-52						
6		+441	+25	+25	+88	+151	+164	+309	+693	+454	-422	-246	0	-233	+38	+472	-435	+706	+598	+176	-164	-428	-573	+176	-189	+76						
7		-227	-378	+63	+265	0	+176	+410	+315	+384	+239	-38	-479	-372	-265	+170	+340	-69	-107	-164	-126	-13	-113	-133	+38	-4						
8		+113	+25	+50	+101	+50	+63	+126	+416	+498	+76	-164	-315	-233	+50	-88	-32	-13	-32	+76	+63	+76	+63	-69	0	+29						
9		+44	+63	+50	+176	+202	+252	+309	+517	+246	-88	-113	-57	-69	-183	0	+44	+126	+252	+195	+139	+57	+88	+126	+133	+105						
10		+126	+189	+176	+189	+227	+214	+176	+284	+391	+189	-88	-227	-258	-227	-176	-214	+113	+208	+265	+88	+69	-25	+69	+176	+81						
11	X	-69	-189	+170	-32	+69	+151	0	+126	+265	+126	+57	+76	-44	-233	-176	0	+107	+145	+126	+94	0	+50	+82	-13	+37						
12	X	+13	0	0	-38	+69	+133	+94	+183	+189	-94	-246	-189	-69	-94	+246	+126	-69	+63	-25	-69	0	0	-220	+101	+4						
13		+107	-76	-164	-32	+252	-38	+76	+151	+50	-277	-57	-183	-151	+38	+69	+107	+50	+69	+69	+76	+50	+50	+189	+44	+13						
14	X	-69	-50	-69	-76	+19	+50	+107	+176	+183	-25	-94	-69	+120	+69	+25	+32	-69	-126	+170	-88	-32	+57	+69	+13	+13						
15	X	+69	-63	-6	+25	-69	+63	+13	+63	-50	-94	-63	-120	-133	-13	+120	+164	+63	0	-120	-69	-63	-44	0	0	-14						
16	X	+38	0	-13	0	+63	-76	+183	+195	+170	-195	-139	+88	-76	-63	-88	+69	-69	-126	+113	0	+57	-50	-101	-63	-3						
17	X	+32	-69	-13	-94	-57	-57	+69	+113	-57	-265	-334	-195	-133	-76	+126	+69	+76	-69	-151	-82	-113	-63	-76	-50	-61						
18		-63	-32	-69	-69	+63	+50	+189	+189	-25	-378	-328	-101	+63	+126	+239	+113	-227	-126	-151	+661	+94	-183	-63	-145	-11						
19		-170	-113	-63	+50	-246	+195	+246	+378	+573	+63	-113	-485	-277	-151	-63	+63	+176	+50	+126	-63	-50	-76	+69	-76	+2						
20	X	-183	-63	0	0	-13	-50	+120	+302	+220	-120	-252	-315	-422	-309	-63	+139	+113	+189	-151	-50	-126	0	+296	0	-31						
21	X	-57	-328	-69	-189	-88	-183	+69	+391	+510	+195	-378	-321	+25	-334	-258	+44	+258	+57	-88	-113	-120	-63	-69	-88	-50						
22	X	-63	-113	-88	-113	-145	-76	+145	+447	+435	+113	-296	-441	-472	+25	+113	+133	+214	+63	-176	-133	-19	-120	-63	-19	-27						
23	X	-164	0	0	0	0	0	+151	+321	+120	-189	-340	-359	-372	-189	-164	+69	+126	+214	+63	-19	-113	+151	-107	+113	-29						
24		-19	-164	-176	+107	0	0	+63	+403	+309	-25	-158	-277	-372	-309	-63	+88	+284	+32	0	-120	-63	-88	-133	-57	-31						
25		-69	-126	-38	0	-76	-63	+139	+69	+50	+57	-44	+107	+176	+63	-120	-220	+50	+504	-265	+76	-69	+19	-113	+126	+10						
26		-189	-252	+113	-113	-384	+76	0	+133	+450	+406	0	-70	-412	+76	-70	+355	+393	+850	+1090	-672	-184	+57	+1331	+437	+32						
27		-349	-406	-507	-406	-95	+146	+197	-514	+133	+203	+260	+412	+266	-311	+32	+285	-184	+266	-328	-317	-254	-222	-63	-139	-79						
28		-767	+304	+235	-260	+51	+76	-246	+127	+82	+178	+101	0	-323	-406	-222	-70	+146	+197	+51	-254	-197	+70	+323	-76	-37						
29		-520	-185	-374	+63	+114	+13	-202	+228	+63	+577	+406	-279	0	-197	+76	+76	+393	+260	+114	-70	-380	-520	+197	-247	-16						
30		-254	-127	-247	+190	-178	-126	+178	-70	-190	-133	-63	-51	+63	-241	-63	-57	-63	-127	-152	0	-197	-1834	-254	-336	-84						
31		+95	-114	-63	+51	-120	-57	-70	+323	+336	+437	+133	-114	-387	-184	-184	-190	-63	+120	+197	-76	0	+70	+63	-456	-11						
MEANS		-58	-61	+3	-33	-9	+30	+137	+256	+202	+18	-113	-185	-158	-83	+10	+49	+115	+116	+64	-71	-97	-104	-10	-78	-2						
ALL DAYS																																
MEANS		-19	-88	-11	-52	-15	-4	+95	+232	+198	-55	-208	-184	-158	-122	-12	+84	+75	+41	-24	-53	-53	-8	-19	-1	-16						
10 DAYS																																

* = 10 LEAST DISTURBED DAYS

TABLE 287

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1941
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
SEPTEMBER 1941
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION N 17° 8' E										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-367	-235	-61	+127	+48	+37	+314	+177	+428	+115	-211	-465	-471	-392	-248	-127	+217	+181	-66	-169	-145	-115	-60	-314	-57						
2		+670	+85	+48	-66	+60	+187	+326	+266	-115	-368	-435	-302	-314	-137	-109	+217	+429	+48	-236	-187	-60	-109	-85	0	-10						
3	X	+30	-36	+60	+60	+42	+113	+248	+193	+60	-217	-447	-344	-382	-139	-60	+145	+109	0	-60	-145	-109	-60	-72	-66	-51						
4	X	0	0	0	+60	+115	+109	+127	+425	+513	+248	-157	-417	-622	-604	-374	-139	+145	+97	+72	-85	0	-48	-72	-54	-109	-31					
5	X	-60	-43	-66	-53	0	+121	+423	+429	+72	-246	-550	-489	-374	-350	+60	+181	-12	-115	-37	+12	0	-12	-79	-91	-54						
6		-60	-12	+60	+85	+79	+121	+256	+471	+193	-254	-392	-604	-471	-368	-121	+54	+181	-12	-127	-54	-48	-211	-66	-121	-61						
7		+338	+66	-66	+121	-131	+248	+242	-91	+302	-181	-429	-435	-465	0	+175	+145	0	+18	+127	+175	0	-48	-127	+60	0						
8	X	+48	-54	0	-127	0	+230	+441	+544	+127	-302	-610	-535	-471	-236	-66	+72	+175	+127	-103	+127	-54	0	-66	-121	-38						
9	X	-109	-43	-350	+193	+121	+137	+483	+658	+210	-187	-435	-725	-562	-544	-236	-12	+731	+127	-66	-139	+169	0	-187	-72	-32						
10	X	-115	-60	0	-12	-56	+127	+435	+634	+362	-43	-429	-556	-544	-268	-169	0	-72	-72	-12	-66	-145	-133	-54	-187	-65						
11		0	-60	+24	-115	+411	-538	+362	+66	0	-66	-356	-441	-314	-109	+60	+181	+193	-66	-187	+109	-242	-109	-60	-60	-55						
12	X	-127	+12	-66	+79	-230	+30	+254	+308	+193	-36	-302	-423	-362	-236	-187	-151	-109	-60	-60	0	+48	-36	-30	-72	-66						
13		-60	-121	-57	-175	-131	+181	-187	-580	+350	+133	+121	+187	+187	-38	+459	-127	+242	-127	+121	+785	-423	+97	+60	-852	-3						
14		+290	+308	-501	+157	-242	-66	+230	+187	+193	-169	-175	0	-30	-235	+181	+193	-230	+393	-326	-230	-193	-664	+109	-121	-27						
15		+604	-169	-86	-374	+66	-127	-181	+242	+175	-72	-109	+254	-447	+35	-66	0	-36	+169	+894	-610	-48	+308	-314	-60	+5						
16		-60	-48	-115	-60	0	-18	+193	+181	+157	-66	-60	-242	-368	-356	-242	+302	0	-60	+121	-163	-60	-60	+85	-66	-42						
17		+60	-66	-18	-121	+85	+121	+308	+423	-248	-362	-356	-242	-242	0	-66	+72	-109	+121	+60	+20	+103	-393	-966	-326	-106						
18		-1256	+356	-397	-1389	-658	-405	-181	-272	-568	-785	-773	-556	-652	+350	-308	+187	-91	+568	-356	-248	-628	-193	-169	-66	-379						
19		-60	-230	+296	-234	-234	+181	+362	+423	+109	-48	-495	-737	-670	-326	0	+60	+181	+109	-72	-242	+1582	+1093	-217	+230	-50						
20		+211	-632	+151	-127	-151	+302	+169	+306	+175	-725	-477	-236	-236	-66	+37	+60	-48	-133	-145	-60	-109	-115	+97	-302	-66						
21		+60	-48	-56	+72	+72	+121	+187	+296	+362	-48	-471	-538	-532	-236	-236	-36	-60	-115	-169	-54	-48	+12	-60	-115	-71						
22	X	-26	-97	+54	-43	-54	-127	+532	+393	+243	-670	-604	-544	-230	-48	+72	+181	-54	+230	+60	-109	+242	-72	+248	-163	-25						
23		-103	-72	-121	-12	+66	-248	+30	+187	-60	-175	-121	-181	-336	-109	+145	+447	+834	-447	0	-72	0	-145	-187	-121	-34						
24		+181	-326	+187	-302	-48	-181	+296	+217	+417	-308	-489	-320	-193	-163	-115	0	+72	-79	0	+109	+12	-12	-60	-48	-48						
25		-72	-12	-66	-181	-30	+175	+254	+157	+60	-236	-169	-230	-169	-187	-236	-72	+60	+60	+60	+181	+181	-181	-296	-85	-51						
26	X	+604	+411	+121	+60	-109	-175	+272	+296	+109	-48	-405	-423	-368	-181	+48	+181	+79	0	-54	-127	+60	+60	-18	+60	+19						
27	X	+54	+193	+127	-12	-60	+72	+326	+314	+187	-242	-423	-308	-60	-193	+127	+193	-197	-35	+66	-72	+181	-181	-211	+242	+2						
28		+121	+115	+181	-308	-175	+109	+181	+236	+109	-60	-550	-495	-184	+121	+181	+242	-169	-72	+532	-284	-175	-60	-48	+121	-14						
29		-230	+91	-109	-79	-254	+290	+260	+205	+109	-423	-290	-302	-60	+60	+36	+109	-54	-97	-48	-54	-66	+48	-181	-60	-46						
30																																
MEANS ALL DAYS		+18	-26	-48	-96	-53	+44	+256	+286	+137	-217	-388	-400	-344	-162	-33	+105	+78	+21	-8	-47	-1	-122	-106	-99	-50						
MEANS 10 DAYS		+26	+12	+7	+19	-9	+109	+343	+403	+182	-158	-424	-515	-435	-288	-121	+45	+88	+2	-65	-21	+5	-42	-92	-86	-44						

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										DIRECTION										E 0° 5' N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN																									
1		+316	-114	+63	+139	+70	+63	+246	+436	+379	+171	+126	-171	-246	-139	-183	+63	+246	+114	-70	-240	-177	-107	-57	-316	+26																									
2		+487	0	-63	-76	-70	+57	+190	+215	-51	-196	-190	-183	-297	-57	-177	+196	+253	-133	-126	-152	-114	-133	-190	-57	-36																									
3	X	0	-76	-57	-51	+57	-12	+63	+177	+164	0	-196	-246	-123	0	-76	-70	-51	-44	-70	-164	-120	-126	-202	-57	-54																									
4	X	-76	-63	-70	-101	0	-63	+190	+386	+316	+120	-70	-246	-316	-221	-202	0	-177	-57	-126	-63	0	-63	-32	-63	-42																									
5	X	-70	-76	-126	-114	-88	+38	+202	+354	+253	+63	-246	-379	-203	-133	-63	+63	-70	-126	-177	-70	-51	-57	-76	-107	-57																									
6		-76	-70	-51	0	0	-19	+190	+354	+234	0	-252	-152	-259	-316	-253	-190	+19	-70	-120	-25	0	-228	-63	+190	-48																									
7		+278	-171	-190	0	-297	+126	+316	-310	+341	+164	-51	-120	-152	+373	0	-228	-177	-120	+190	+228	-126	-133	-253	-76	-16																									
8	X	+63	-63	-139	-190	-114	0	+145	+259	+133	-63	-253	-177	-171	-139	-126	-63	+107	-139	-139	+13	-114	+63	-171	-164	-60																									
9	X	-183	-70	-373	+64	-38	0	+271	+449	+253	+82	-101	-322	-265	-310	-164	-171	+442	+76	-183	-253	-101	+32	-253	-13	+49																									
10	X	-120	-82	-76	-63	-126	-32	+177	+386	+379	+126	-196	-253	-322	-310	-139	-51	-177	-139	+63	-57	-120	-196	-70	-310	-71																									
11		0	-70	-82	-190	+240	-449	+32	-101	+63	+88	-70	-139	-120	-13	+70	+139	0	-57	-126	-57	-177	-70	-63	-63	-51																									
12	X	-158	-57	-183	+88	-196	0	+63	+240	+246	+177	-63	-253	-246	-190	-177	-177	-253	-126	-63	-6	+96	+6	+13	-63	-53																									
13		-76	-183	-126	-272	-215	+303	+171	-322	+215	+303	+316	+544	+417	+329	+828	-57	+246	-145	+90	+505	-588	+114	+322	-822	+79																									
14		+442	+215	-297	+63	-190	-76	+70	+246	+303	+70	+152	+373	+297	-70	+310	-449	-398	-202	-120	-190	-392	-746	+57	-13	-23																									
15		+468	-133	-101	-126	-126	+13	-177	-63	+82	+329	+265	+948	-70	+126	-297	-322	-202	+133	+493	-581	+133	-177	-126	+114	+25																									
16		-63	-158	-183	-114	-82	-57	+63	+63	+202	+183	+97	+190	-88	-379	-303	+183	-133	-63	-177	-126	-114	-70	+13	-63	-41																									
17		-57	-177	-120	-234	-57	-57	+133	+322	-76	-51	-133	-449	-190	-51	-221	-82	-272	-57	0	+202	+63	-752	-556	-600	-145																									
18		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19		-506	-1188	-708	-1093	-702	-733	-499	-449	-815	-803	-436	+126	+386	-329	-632	+57	+164	+702	-379	-442	-885	+88	-38	-196	-388																									
20		-246	-253	-259	-386	+202	+63	-221	+114	+196	+240	-70	-487	-506	-322	-183	-253	-32	+63	-57	-253	+847	-430	-183	+70	-98																									
21		+348	-651	+152	-209	0	+284	-177	+702	+739	-512	-322	-139	-259	-145	-57	-177	-183	-265	-183	-57	-133	-177	-32	-455	-80																									
22	X	+19	-133	-190	-51	-63	-63	+51	+120	+253	+63	-259	-240	-297	-196	-209	-133	-177	-152	-57	-63	+13	-51	-114	-88																										
23		-107	-177	-63	-133	-133	-335	-316	+512	+525	-322	-379	-442	-202	-51	+63	+63	-177	-259	-63	-51	+57	-133	+265	-38	-31																									
24		-114	-190	-133	-133	-63	-461	-310	-57	+63	+114	+253	+442	0	+133	+303	+303	+632	+19	-221	-202	-133	-190	-297	-190	-18																									
25		-246	-114	-133	-246	-177	-38	+221	+19	+259	-57	-53	-120	-152	-107	-259	-177	-183	-133	-101	-120	-51	-133	-76	-100																										
26	X	-133	-133	-133	-202	-152	+63	+126	+164	+196	-63	-63	-152	-25	-133	-297	-190	-114	+63	-51	+196	-177	-190	-354	+63	-70																									
27	X	+284	+246	-63	-76	-240	-202	+126	+253	+253	+177	-253	-278	-316	-253	-76	0	+32	-51	-152	-240	-126	-57	0	-42																										
28		-32	+126	+114	0	-51	0	+196	+354	+267	+63	-114	-95	+25	-76	+322	+114	-202	-63	-63	-76	+265	-246	-114	+177	+41																									
29		+63	+114	-57	-234	+101	+126	+63	+240	+202	+183	-316	-322	-101	+126	+316	+114	-177	-63	-82	+51	-190	-57	-82	+63	+3																									
30		-297	+13	-57	+32	-246	+202	+190	+190	+240	-126	-63	-114	-3	+114	-133	+63	-63	-126	-51	+70	-114	+70	-126	-126	-18																									
MEANS ALL DAYS		+7	-127	-128	-135	-45	-43	+82	+181	+204	+18	-101	-98	-134	-94	-69	-49	-37	-32	-76	-73	-92	-138	-98	-114	-52																									
MEANS 10 DAYS		-37	-51	-141	-70	-96	-27	+136	+279	+245	+68	-170	-255	-239	-188	-153	-79	-44	-72	-105	-70	-78	-69	-120	-83	-44																									

* = 10 LEAST DISTURBED DAYS

TABLE 289

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1941
EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER
OCTOBER 1941
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT NORTH-EAST										DIRECTION N 17° 8' E										MEAN				
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20			20-21	21-22	22-23	23-24
1	X	+169	- 48	-284	+109	0	+127	+230	+182	+79	-121	-230	-254	-206	- 73	0	+ 67	0	-182	- 60	- 67	- 91	- 60	0	- 48	- 32
2		+ 12	- 48	- 54	- 60	0	+ 12	+242	+327	+242	- 91	-375	-593	-333	+103	+ 30	+296	+182	0	+ 79	- 36	- 60	-109	0	-236	- 20
3	X	0	0	-145	+ 12	+ 60	+ 60	+151	+309	+242	-254	-424	-436	-242	- 73	+ 85	+169	+ 73	-109	-121	- 60	- 60	-127	- 60	- 67	- 42
4	X	- 48	- 91	+ 60	+ 60	0	+109	+375	+538	-296	-212	-460	-605	-369	-321	+ 60	+ 24	+175	+182	+ 60	0	+ 79	0	+ 24	0	- 27
5	X	-212	+484	+ 97	-145	-302	+ 60	+254	+551	+544	+ 91	-194	-478	-484	-363	-230	- 54	+121	+ 67	+ 73	+ 97	+ 73	0	+ 60	0	+ 5
6		- 48	+ 67	+182	+ 60	0	0	+ 73	+242	+302	+ 60	-194	-363	-424	-163	-151	0	+ 60	+ 91	0	- 30	+ 67	- 12	- 60	+ 12	- 10
7		0	0	- 18	- 30	0	+ 36	+242	+424	+411	- 73	-363	-544	-496	-266	- 60	+ 30	0	+ 12	+484	+ 60	+424	+121	-248	- 60	+ 4
8	X	-121	- 60	- 91	- 54	- 67	+ 60	+188	+272	+393	+ 97	-169	-436	-296	-290	0	+ 67	+ 97	- 67	+ 60	0	+182	+ 54	- 60	-121	- 15
9		- 67	- 73	-127	0	- 48	- 60	-127	+369	+363	+315	- 73	-411	-557	-248	-315	-121	- 67	- 12	+ 12	0	0	0	- 12	-127	- 58
10		- 67	- 73	-121	- 60	- 67	+139	+248	+484	+417	+188	-363	-357	-605	-296	-169	+ 60	0	+115	+351	+121	+ 48	+127	+ 67	- 48	+ 60
11		+115	+ 24	+430	-472	-127	-393	+127	+254	+684	+478	+194	-284	- 48	-484	-381	+702	+726	-351	-345	+793	+ 60	-442	-351	-544	+ 15
12		+ 12	+182	- 54	-230	-236	-109	+230	+200	+417	+169	-163	-369	-357	-133	-121	- 67	+109	- 60	-121	- 12	- 60	+ 48	-260	- 67	- 44
13		+242	-182	- 60	-284	- 60	+ 60	+236	+309	+230	-236	-302	-278	-248	- 73	- 12	+ 12	+ 60	+ 48	+ 67	+ 54	+ 60	+121	+ 67	- 67	- 14
14		- 67	-133	- 54	-551	-145	+309	-182	+ 36	- 48	-109	0	-175	-121	+ 67	+145	+ 73	+194	+302	0	- 60	+ 91	+302	- 48	+302	+ 5
15		-157	0	-266	- 60	+ 67	-175	-175	0	-175	-309	-194	-157	+ 79	+182	+242	+121	-169	-121	- 60	+188	+605	-115	-182	-182	- 42
16		-157	-484	0	- 54	- 60	0	-182	+242	+182	-182	-442	-182	-127	+ 60	+375	-248	-169	-175	- 48	- 73	- 60	0	0	+127	- 69
17		+236	+ 91	-194	- 54	-266	0	+182	+236	+ 48	-230	-242	-188	- 91	+ 48	0	+ 60	- 54	- 73	0	- 67	- 73	- 85	- 60	- 73	- 35
18	X	+ 60	-254	+290	-121	+169	0	+169	+296	+188	-242	-369	-436	-266	- 54	+175	+175	+ 67	0	+175	+ 36	0	- 67	-109	-242	- 15
19		+188	- 54	+ 60	0	- 24	- 60	+ 54	+230	+357	-605	-369	-115	- 67	+133	+ 85	+ 60	- 12	- 6	+ 60	0	+ 54	+ 12	+ 12	+ 67	+ 2
20	X	+ 54	+169	0	- 67	-182	- 48	+121	+ 12	-109	-296	-424	-309	-115	0	+ 54	+ 67	+ 18	0	+182	-127	+ 60	+145	- 12	-248	- 44
21	X	-145	- 54	-109	- 60	0	+109	+309	+387	+302	- 67	-424	-672	-544	-236	0	+121	+ 60	+ 97	+121	+ 73	- 54	+ 12	+127	0	- 27
22		- 67	-121	-188	+ 36	-109	-109	- 60	+272	+817	+786	+248	-424	-327	+381	+ 30	0	+242	- 54	+127	+157	+194	+351	-363	-284	+ 64
23		+ 24	-109	-175	- 24	+ 60	+133	+357	+169	+302	-188	-466	-194	-151	- 85	0	+188	+182	+ 67	-175	- 54	+194	- 60	0	-127	- 6
24		-121	-248	-230	+ 60	- 60	- 12	+ 60	+296	+242	+ 60	-145	-182	+109	-430	-315	-175	+109	-121	+109	+242	+369	-194	-127	- 67	- 32
25	X	-145	- 60	-115	- 73	- 60	+ 79	+236	+327	+424	+127	-145	-309	-260	-290	-284	-133	- 48	+ 67	+145	+ 48	+ 54	- 60	- 67	- 60	- 25
26		-121	+109	-260	+121	+127	+182	+230	+375	+182	- 60	- 73	-254	-369	-248	+ 91	- 48	+169	+182	0	0	+115	+ 60	- 60	- 67	+ 16
27	X	-127	0	+ 60	-309	+ 60	+127	+194	+236	+ 67	-133	-169	-236	-230	- 60	+133	-169	- 60	0	+ 60	0	- 60	- 48	0	+ 30	- 26
28		- 79	- 12	- 60	- 12	-121	0	+212	+188	- 73	-115	- 60	-121	-182	- 54	+ 60	-175	+ 48	+321	-182	-115	-109	- 73	- 60	- 48	- 34
29		-109	- 67	0	-127	+ 48	+ 48	+ 60	+169	- 54	-254	-182	-133	- 67	+ 60	+ 60	+ 60	-109	- 36	+ 48	+ 85	+145	-157	+ 36	- 67	- 23
30		- 60	- 60	-182	- 60	-175	+ 85	+200	+163	0	- 48	-212	- 48	- 73	+ 60	- 67	+ 60	+ 60	0	+248	+121	-242	+823	+666	+151	+ 59
31		-454	-296	-121	-188	-230	-115	+ 54	- 30	-182	-121	+109	-254	+175	- 67	+696	+544	+301	+175	+634	+200	+774	+605	+1640	-182	+ 99
MEANS ALL DAYS		- 41	- 45	- 56	- 85	- 56	+ 21	+139	+260	+209	- 51	-215	-316	-235	-104	+ 7	+ 57	+109	+ 9	+ 96	+ 51	+ 90	+ 36	- 88	- 76	- 12
MEANS 10 DAYS		- 52	+ 9	- 24	- 65	- 32	+ 58	+223	+311	+183	-101	-301	-417	-301	-176	- 1	+ 33	+ 50	+ 6	+ 70	0	+ 18	- 15	- 10	- 76	- 25

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

OCTOBER 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0° S N									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1	X	+133	-38	-252	+63	-25	+76	+170	+139	+189	-13	-114	-69	-69	-63	-63	-50	0	-151	-63	-57	-76	-50	-44	0	-18					
2		0	-13	0	0	0	+25	+126	+309	+353	+133	-177	-448	-202	+76	-63	+309	+202	+63	-76	-139	-126	-69	-63	-202	+1					
3	X	-88	-114	-189	+63	+63	+13	+69	+240	+246	-114	-196	-183	-63	+63	+50	+88	0	-126	-82	-50	0	-63	0	-63	-18					
4	X	-57	-126	+114	+50	+50	+126	+252	+379	+284	-19	-196	-316	-202	-259	-69	0	+252	+259	+57	0	0	-13	+36	-50	+24					
5	X	-316	+309	+227	-13	-126	+126	+202	+372	+492	+259	+50	-133	-252	-309	-240	-196	-63	-57	0	-69	+13	0	+50	0	+14					
6		-50	-189	+76	+13	-126	-114	+57	+202	+328	+189	-50	-114	-139	-114	-202	-120	0	+57	-114	-101	+44	-69	-101	0	-27					
7		-63	-76	-69	-63	-38	-13	+189	+379	+372	+63	-133	-252	-246	-196	-164	-69	0	+114	+442	+252	+328	+133	-322	-76	+20					
8	X	-120	-76	-114	-120	-114	+13	+76	+133	+240	+265	+133	-259	-139	-177	0	0	-50	-120	0	+32	+240	+44	-63	-76	-10					
9		-76	-101	-114	-63	-63	-126	-50	+177	+259	+328	+82	-76	-246	-76	-372	-202	-151	-133	-76	-57	+69	+38	+19	-120	-53					
10		-57	-69	-126	-76	-69	+126	+57	+278	+215	+309	-114	+50	-164	+139	0	0	-50	-63	+322	+139	-114	+13	-114	-524	+4					
11		+366	+183	+196	+215	+133	-189	-76	+126	+259	+379	+858	+316	+265	-385	-341	+536	+694	-196	-372	+757	+177	-114	-259	-322	+134					
12		+196	+366	+372	+69	+246	+183	+316	+353	+631	+385	+69	+63	+69	+126	+120	+126	0	-114	-126	+57	0	+63	-202	+63	+143					
13		+202	-139	-50	+63	-196	+38	+177	+189	+215	-50	+63	-76	-63	-63	0	0	+120	-50	+69	+120	+76	-69	+177	+120	+36					
14		+50	-57	-13	-309	-189	+177	+50	+63	+435	-202	0	0	+114	+133	+177	+107	+372	+322	+19	-246	-13	+297	-69	+252	+61					
15		-32	-57	-151	-189	+189	-126	-63	+69	-19	-38	-13	-50	+259	+202	+328	+19	-133	-177	-76	+133	+606	+63	-13	-133	+25					
16		-50	-366	-133	-76	-63	-50	0	+189	+252	+151	-151	-196	-189	+309	+581	-221	-183	-297	-120	-126	-63	+50	+63	+126	-23					
17		-95	+126	-177	-57	-151	+126	+189	+177	+76	-183	-126	-133	-63	+63	-57	+63	0	0	-69	-63	-76	-57	-69	-196	-31					
18	X	+126	-189	+69	-126	+63	0	+63	+177	+189	0	-76	-189	-303	-170	+13	+177	+158	+63	+126	+63	+69	-50	-126	-511	-16					
19		+265	-57	-63	-50	-107	-50	+126	+189	+385	-183	-309	-50	0	+177	+19	-114	-183	-69	-19	+32	+57	+69	0	+13	+3					
20	X	-120	+120	-50	-120	-177	-120	-76	-126	-13	-76	-151	-57	+57	+114	-63	-82	-50	+13	+183	-120	+196	+114	+57	+183	-30					
21	X	-183	-133	-120	-76	-63	0	+133	+309	+353	+177	-133	-366	-316	-246	-151	-69	+57	+126	-32	+120	0	+120	+126	+63	-13					
22		-69	-189	-259	-69	-139	-196	-278	-126	+505	+1205	+833	+145	-429	+467	+189	+151	-19	-126	+50	+177	+196	-69	-379	-183	+58					
23		+82	-76	-189	-120	0	0	+189	+57	+265	-57	-170	+114	+13	-76	0	+126	+183	-189	-259	-183	+246	+63	+63	-76	-5					
24		-114	-177	-252	-38	-69	-120	-63	+196	+322	+101	+82	+189	+498	-309	-429	-189	0	-379	-25	+196	+189	-240	-120	-63	-34					
25	X	-126	-50	-189	-126	-114	-63	+63	+88	+189	+183	+133	0	-38	-189	-240	-240	-183	-63	+63	-69	0	-69	-151	-13	-50					
26		-189	+13	-227	+63	+114	+290	+133	+303	+114	+63	+126	+246	-233	-69	+246	0	+114	-133	-202	-120	+50	-120	-114	-133	+14					
27	X	-189	-50	-120	-259	+13	+50	+69	+114	-57	-133	-38	-50	0	+126	+145	-202	-114	-69	-19	-19	-57	0	-69	-69	-42					
28		-57	-63	-114	-69	-139	-69	+189	+76	-151	-38	+196	+259	+63	+63	-25	-57	-25	-114	-196	-208	-133	-126	-69	-69	-36					
29		-120	-101	-76	-145	0	0	-76	+158	-57	-76	+38	+38	+76	+63	+63	+76	-101	-88	+38	+126	-246	-57	+57	-126	-22					
30		-114	-63	-227	-69	-177	0	+63	+202	-63	-19	0	+177	+63	+13	-133	-50	-13	-50	+63	+183	-246	+1319	+637	+69	+65					
31		-505	-316	-278	-303	-120	-196	-316	-133	-120	+63	+341	+316	+265	+63	+663	+599	+1458	+820	+1395	+391	+663	+246	-1710	+76	+140					
MEANS ALL DAYS		-44	-57	-81	-62	-45	-2	+63	+170	+216	+98	-28	-36	-52	-16	-1	+17	+74	-30	+29	+37	+62	+41	-89	-78	+10					
MEANS 10 DAYS		-94	-35	-62	-66	-43	+22	+102	+182	+211	+53	-59	-162	-132	-111	-62	-57	+1	-12	+23	-17	+38	+3	-17	-90	-16					

* = 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

TABLE 291

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTHERLY										LENGTH IN KMS										DIRECTION N 17° 8' E									
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+776	-242	-73	-770	-776	0	-436	+636	-776	-812	+61	+145	+170	+297	+248	+109	-61	-73	-36	-61	-67	-109	-133	-121	-88					
2	X	-145	-109	-115	-121	-97	-12	+121	+170	+55	-200	-364	-267	-145	+48	+139	-48	+61	+182	-121	-48	-48	0	-127	-127	-55					
3	X	-115	-115	-67	-73	-61	+127	+297	+242	-364	-188	-121	-194	-145	-115	-103	-176	+48	+36	0	-121	+61	+115	+73	0	-40					
4	X	-61	-133	+18	0	-48	0	+48	+182	+121	-182	-248	-267	-242	-176	+48	0	-48	-61	+61	+61	+48	+48	-73	-158	-44					
5		-48	-67	-73	0	0	+30	+194	+291	+230	+267	+55	-533	-321	+267	-36	+267	-133	+194	0	-55	+145	+188	+170	-406	+26					
6		+479	-242	+182	-491	-776	-255	+430	+91	-351	+145	-182	-242	-79	+121	+673	-61	+79	+436	-364	-133	-12	-248	0	-279	-45					
7		-273	-67	-182	-188	+364	+48	+164	+309	+242	+194	-152	-424	-551	-503	-48	+176	+236	+297	0	+612	+370	-61	-161	+121	+16					
8		-242	-242	-291	-67	-176	-73	+61	-127	+479	+30	0	-133	-424	-236	-79	-48	+121	+139	0	+61	+24	+30	-242	+12	-59					
9		-121	-109	0	-539	-55	+145	+230	+200	+224	-18	-67	-127	-127	-73	-127	-109	-61	+127	+170	+351	-55	+12	-61	-182	-15					
10		-85	-164	-727	+248	+36	-18	-733	+636	+576	+358	+67	-109	-309	-133	-48	0	+594	+485	+224	+394	+176	-230	-242	-176	+34					
11		-109	-73	-551	0	+127	-133	+127	+236	+206	+61	+127	-315	-345	-291	-121	+145	+164	+55	0	+55	+12	+103	-61	-158	-31					
12	X	-42	-121	-36	-127	-61	-67	+61	-48	+127	-182	-164	-73	-127	+152	+176	-79	+12	+139	+109	+170	+24	-73	-139	-61	-18					
13	X	+12	-176	0	-145	-430	+170	+12	+121	+242	+67	-48	-297	-194	-121	-79	0	+133	-12	+36	0	-48	+97	0	-12	-28					
14	X	-61	-182	-109	-194	-67	+121	+61	+236	+188	+48	-73	-188	-194	-61	0	-48	-61	0	-6	-12	-61	-61	-61	-127	-38					
15	X	-127	-109	-48	-36	-121	-12	0	+170	+121	-73	-121	-182	-236	-170	-73	-109	-12	+115	+182	+73	+115	+170	-67	-182	-30					
16		-127	-97	-36	0	-12	0	0	+85	+182	+67	-103	-358	-370	-315	0	-67	-36	+139	+412	+127	+121	+230	+182	+533	+23					
17		-30	-606	+127	+97	+109	-73	-109	+558	-133	-170	+236	-230	+67	+485	-145	0	+230	+164	+242	+48	-48	+36	0	-188	+28					
18		-382	+158	-182	-61	+85	-48	+121	+436	+303	+170	+67	-176	-133	-412	+55	-85	-230	+418	+667	-321	-109	-121	-182	+109	+6					
19		-176	-109	-242	-121	+127	+115	+48	+55	+103	0	+109	-242	-200	-48	+358	+351	0	+351	+67	+73	+73	+61	+121	0	+36					
20	X	-327	-48	-12	0	0	+109	+182	+182	+121	-109	-127	-303	-242	-230	-206	+79	+230	+364	+364	+351	+55	+61	0	0	+21					
21		-48	0	0	0	+67	0	+242	+351	+418	+248	-48	-309	-291	-242	0	0	+127	+230	+67	+97	+121	+67	+85	+79	+53					
22		-127	-152	+55	+170	0	+55	+188	+321	+309	-61	-48	-315	-406	+170	+109	-236	+364	+176	+412	+479	+654	+133	-170	-236	+77					
23		-121	-485	+48	-121	+61	+48	+176	+309	+248	-115	-170	-200	-194	-127	-73	-73	-109	+194	+121	+121	+121	+61	+61	-67	-12					
24	X	-73	0	-42	-115	-67	-121	-18	+127	0	0	-67	-73	-145	-121	-152	-115	-79	+115	+61	+115	+61	-18	+61	-55	-30					
25	X	-303	-188	0	-18	0	-55	-85	+12	+109	-30	-67	-242	-36	0	0	0	0	0	0	-12	-12	+12	-61	-73	-44					
26		-91	-67	-55	-61	-73	-242	-61	-182	-127	+61	+139	+115	-18	-115	-103	-145	-61	-48	0	-12	-188	-18	+545	+48	-32					
27		-164	-412	-127	-242	-194	-188	-261	+24	+182	+133	0	-236	-109	-242	-121	-145	+55	+242	+412	+509	+454	+721	+606	+37						
28		+424	+242	-442	-170	-236	-79	-145	-55	-73	-236	+61	-327	-606	-30	+121	+91	+55	-67	-109	-12	0	+61	-61	-48	-68					
29		-48	+48	+61	-67	0	-109	-182	+121	0	-73	-170	-242	-194	-145	-121	+121	-127	0	-73	-48	0	0	-48	-73	-57					
30		-24	-115	-48	+61	0	-73	-79	+170	+61	-255	-248	-364	-127	+48	-61	+127	-24	+79	+61	+248	-242	+18	-61	+291	-24					
MEANS		-59	-133	-99	-105	-76	-20	+22	+196	+101	-28	-56	-216	-213	-73	-4	-2	+32	+141	+93	+100	+60	+34	+6	-39	-13					
ALL DAYS																															
MEANS		-124	-118	-41	-83	-95	+26	+68	+139	+72	-85	-140	-209	-171	-79	-25	-50	+28	+88	+89	+58	+20	+35	-39	-80	-31					
10 DAYS																															

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1941

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

NOVEMBER 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										93.9 DIRECTION E 0.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+496	-337	-254	-636	-636	-127	-248	+547	-318	-865	-191	-64	+64	+178	+114	+19	-153	-127	-64	-108	-70	-89	-178	-121	-132							
2	X	-153	-178	-108	-134	-121	-127	0	+51	0	-134	-197	-89	-13	+178	+70	-76	-64	-57	-267	-134	-83	-57	-114	-134	-81							
3	X	-140	-165	-184	-127	-134	+25	+197	+114	-248	-121	0	-134	-114	-89	-51	-289	-159	+108	-19	-153	+114	+127	+38	-121	-64							
4	X	-76	-165	-70	-51	-108	-64	-51	+76	+51	-134	-165	-127	-197	-76	-57	-121	-159	-121	-83	-57	-114	-19	-76	-159	-88							
5		+57	-127	-83	-64	-76	-64	+64	+153	+254	+312	+560	-445	-223	+611	+64	-70	-267	-114	-223	-178	-388	+204	+127	-159	-3							
6		+305	-204	+134	-598	-515	-242	+522	-153	-121	+191	+127	-191	-108	+191	+401	-114	-102	+76	-636	-184	-89	-318	0	-76	-71							
7		-382	-76	-70	-51	+57	+64	-64	+70	+134	+566	+159	-140	-382	-439	-184	0	-57	-76	+114	+490	-134	+70	+70	-591	-36							
8		-57	-51	-114	-204	-121	-204	+114	-70	+134	+19	+134	+343	-305	-165	-121	-254	-70	-51	-121	-76	0	13	-375	+64	-65							
9		-134	-146	-13	-324	-51	-64	+254	+191	+165	-254	+57	+121	+127	-6	-184	-197	-178	+64	+178	+331	-95	+64	-127	-95	-13							
10		-45	-121	-560	+95	-70	-140	-286	+312	+254	+273	+827	-45	-337	-216	-134	-127	+750	+452	0	+51	-267	-248	-254	-178	-1							
11		-191	-216	-560	+134	-64	-127	-13	+95	+114	0	+483	-70	-305	-197	-108	+121	0	-178	-127	-95	-38	+13	-191	-108	-68							
12	X	+51	-102	-64	-184	-102	-76	-32	-114	+13	-57	-70	+83	-13	+127	+146	-210	-76	-57	-51	0	-38	-114	-184	+153	-40							
13	X	+191	-38	+64	0	-204	0	+13	+57	+178	+261	+223	+45	+32	0	-64	+51	+102	-83	+64	+89	+191	+382	+318	+343	+91							
14	X	+382	+191	+191	+178	+184	+267	+286	+254	+254	+280	+216	+134	+76	+140	+127	+64	-64	-51	-51	+25	0	+64	+64	-19	+133							
15	X	-25	-51	0	+64	-57	+64	-38	+121	+70	+19	+89	+51	-13	-38	-76	-95	-114	+64	+235	+114	+254	+178	-102	-51	+28							
16		-114	-70	-51	+64	+13	+64	+76	0	+89	+134	+134	-178	-299	-293	0	-83	-64	-38	+445	+254	+242	+254	+76	+700	+56							
17		+89	-356	+13	-70	+121	+178	-64	+636	+223	-57	+318	+254	-70	+706	-324	-261	-57	-64	+184	+19	-146	+114	+38	-114	+55							
18		-235	-76	-184	+127	+89	-83	+184	+375	+439	+496	+439	+439	+254	-445	+57	-204	-257	+598	-191	+51	-13	+127	-89	+312	+92							
19		-127	+51	-70	-13	+134	+432	+134	+70	+121	+184	+254	0	-38	+76	+382	+70	+25	+70	-70	+38	+64	+127	+178	-95	+83							
20	X	-210	+70	0	-70	-64	+114	+178	+134	+127	+70	+121	0	-70	-324	-331	-64	+204	+337	+191	+102	+184	+51	0	0	+31							
21		-19	-57	-13	-134	-64	+25	+70	+318	+305	+299	+254	+19	-127	-146	+64	-121	+108	-57	+127	+57	+191	+134	+127	+76	+60							
22		-83	-134	+51	+146	-51	+51	+127	+191	+548	+70	+178	+70	-127	+572	-76	-401	-114	+70	+305	+382	+261	+83	-76	-197	+81							
23		-153	-439	+114	-114	0	-64	+127	-38	+64	-57	+83	+165	+114	+64	+64	-134	-153	-64	-57	+64	+51	+64	0	-25	-14							
24	X	-51	-51	-19	-76	-114	-178	-89	-127	-178	0	+83	+191	+64	+57	-51	-184	-197	0	0	+70	+19	0	+134	+51	-27							
25	X	-134	-204	-13	-57	-95	-64	-134	-121	0	+114	+134	+45	+191	+114	0	0	-51	-114	-64	-13	+51	+121	+70	-64	-12							
26		-64	-70	-51	-64	-114	-153	-134	-305	-197	+19	+197	+305	+146	+45	-76	-121	-76	-64	-13	0	-261	+121	+535	+356	-2							
27		-121	-312	-197	-191	-324	-293	-184	-108	+127	+267	+184	+254	+38	-32	-197	-191	-191	-70	+413	+490	+708	+986	+852	+903	+117							
28		+102	+127	+1329	+420	-254	-153	-261	-70	-51	-121	+445	+567	-567	-76	-127	-146	-76	-191	-134	-76	+64	+165	-64	0	-75							
29		-242	+172	+38	-13	-51	-127	-197	+64	0	+51	+51	-57	-51	-57	-121	-6	-76	-70	-51	-64	0	+51	0	-51	-33							
30		-13	-70	0	+51	+13	-13	-51	+57	+64	-248	-64	-191	+76	+248	0	+127	-51	+57	+57	+197	-191	+64	-70	+197	+10							
31																																	
MEANS																																	
ALL DAYS		-37	-107	-113	-63	-93	-36	+16	+93	+87	+53	+169	+40	-73	+24	-26	-101	-47	+8	+3	+56	+16	+90	+24	+27	0							
MEANS																																	
10 DAYS		-16	-69	-20	-46	-82	-4	+30	+44	+27	+30	+43	+20	-6	+9	-29	-93	-58	+3	-4	+4	+58	+73	+15	0	-3							

★ = 10 LEAST DISTURBED DAYS

TABLE 293

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1941

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

DECEMBER 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

COMPONENT NORTH-SOUTH		LINE_QM										58.4 DIRECTION N 17° 8 E														
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-176	-42	-297	-152	+947	+546	-346	+1038	-643	+358	-85	-73	+212	+340	+486	+158	+558	+310	-55	+67	-158	+807	-613	-662	+105
2		-637	+182	-182	-127	+61	-146	0	+79	+237	+182	-18	-734	-364	-67	-109	-61	-55	+61	+67	+115	-73	-109	-109	-182	-83
3		-121	-73	-115	-73	-61	-49	+61	+176	+127	+237	-231	-340	-443	-36	-352	-55	+170	+291	+127	+182	+492	-134	-182	-97	-21
4		-164	-121	-176	+243	-164	+103	-12	+200	+115	+49	-73	-49	-127	-61	-134	-109	+61	+79	+30	-61	+12	+121	-61	-61	-15
5		-73	-188	-67	-49	-61	-73	-182	-30	+61	-67	+127	+134	-370	-61	-170	0	-127	+109	+109	+176	+243	-55	+61	-146	-29
6		-67	-127	+67	-127	-188	-170	0	-121	+109	+188	0	-127	-176	-231	-67	-115	+61	+121	+109	+170	-30	-109	-127	-182	-47
7		-115	-219	+188	-176	+146	-67	-61	+61	+121	+61	-49	-109	-146	-237	-109	+61	+121	+127	+170	+85	+61	-67	-73	-12	
8	X	-73	-206	-146	-127	-188	-67	+12	+243	+176	+121	-188	-304	-158	-67	+49	+121	-127	+12	+30	-30	+61	+36	-49	0	-36
9		-127	-49	-73	0	-231	-194	+188	+109	+127	+115	+127	-73	-237	+67	-115	0	+61	-67	+109	+188	+30	-67	0	-61	-7
10	X	-188	-170	-164	0	0	-127	+49	-79	-188	-127	-73	-127	-73	+49	+67	+61	-61	+109	+127	+85	+73	+18	-49	-115	-38
11	X	-127	-170	-127	+61	+18	-109	-49	-55	+61	+49	+61	-73	-146	-243	-170	-61	+18	+61	+121	+121	0	-61	-67	-34	
12	X	-121	-73	-12	-24	+30	+127	0	0	+61	+200	+188	+61	-182	-249	-194	-73	-61	+67	-79	-67	0	+49	+61	0	-12
13		+109	-176	-146	-243	-121	-267	0	-127	+200	+352	+249	+79	-231	-42	+121	+109	+170	+461	+243	+364	+146	-255	-188	-55	+19
14		-443	-12	-486	+352	+364	-158	-243	-219	+85	+194	+322	+255	+237	+182	-61	-291	-176	+67	+127	+55	0	+49	-358	+18	-6
15		-12	-67	-85	-61	-79	-127	-352	-127	+182	+194	+140	-61	-115	-127	+61	-134	+67	+73	+370	+546	+656	-279	-182	-419	+3
16		+109	-67	-49	-61	-109	-61	-127	0	-170	-49	-103	-237	-127	+121	+61	-49	-24	0	+91	+49	+49	+61	-67	+176	-24
17		-358	+364	-115	-109	-140	-61	-127	-170	+61	+121	-12	-188	-61	+170	-73	+267	-97	+109	+182	+194	+61	+55	+188	-164	+4
18		-425	+237	-255	0	+188	0	+79	-91	+188	+109	-55	-85	-194	-176	-30	+170	+121	+115	+134	+127	+109	+61	-18	-134	+7
19		-115	+18	-49	-182	+97	0	+49	+140	+140	+243	-61	-255	-267	-140	-67	0	+121	+176	+219	-55	+73	+12	+12	-91	+1
20	X	-127	-42	-12	-115	+103	+121	+109	+127	+121	+170	0	-176	-255	-297	-249	-243	-121	+115	+121	+109	+91	+49	+49	-73	-18
21	X	-67	-49	-12	-49	-115	-49	+61	+121	+237	+73	0	-127	-237	-188	-194	-79	+61	+109	+115	+121	+127	+18	-61	-115	-12
22	X	-91	-164	-121	-146	-164	-109	-115	+121	+170	+322	+182	-188	-304	-340	-176	-79	+67	+61	+170	+176	+170	-49	+109	-49	-23
23		-188	-164	-134	-188	-109	-322	-85	-42	+61	+176	-121	-12	-67	-176	+182	+49	+285	-67	+182	+170	+127	+127	-127	-109	-23
24		-176	-352	-419	+425	-322	-109	+121	-24	+97	+243	+194	-182	-61	-127	-146	-73	-30	-61	0	+30	+67	+109	0	-127	-38
25		-127	-194	-18	-73	-91	..	..	..	..	+231	+188	-115	-249	-176	-109	-134	-49	-42	+61	-67	+49	+127	+49	-55	..
26		-36	-115	0	-67	-121	-61	-12	-188	+109	+115	+115	-36	-67	-237	0	+121	-61	+109	+388	-61	+109	-67	+121	-61	-0
27		-188	+30	-176	-255	+24	-237	+170	+121	+36	+127	+109	-61	-200	-231	-304	-61	-61	-115	+67	+146	+61	+121	-67	0	-39
28		-188	-140	+49	-127	0	-61	+30	+73	+61	+188	+67	-55	-237	-291	-188	-237	+140	+170	-55	+127	+61	+79	-67	-85	-29
29	X	-67	-176	-61	-73	-49	-61	-61	+61	+182	+109	-67	-182	-188	-297	+249	-61	-121	+55	+67	+18	0	-61	-67	-97	-40
30	X	-73	0	-73	-115	-61	-249	-127	0	+30	+18	-146	-188	-237	-121	+67	+170	+55	+103	+237	+109	-61	-97	-42	-121	-38
31	X	-121	-73	-109	-109	-61	-67	-61	+109	+182	+127	-146	-304	-243	+67	+61	0	-127	+61	+61	+18	+18	-12	-61	-73	-36
MEANS ALL DAYS		-148	-73	-112	-56	-12	-70	-34	+50	+78	+140	+15	-127	-169	-102	-50	-16	+30	+94	+117	+109	+80	+14	-68	-108	-17
MEANS 10 DAYS		-106	-112	-84	-70	-49	-59	-18	+65	+103	+106	-19	-161	-202	-169	-49	-24	-42	+75	+91	+66	+60	-5	-17	-71	-29

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1941

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1941

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+248	-45	-166	+89	+905	+382	+866	+1108	+153	-134	+197	+38	+790	+191	+516	-172	+153	+89	-121	+178	-484	+707	-248	-389	+202					
2		-484	+76	-76	-299	0	-115	-185	-57	+204	+325	+459	-344	-248	-153	-204	-210	-204	-64	-51	+64	-134	-13	-89	-185	-83					
3		-127	-140	-127	-153	-76	-51	0	+51	0	+204	0	-115	-191	+197	-325	-83	+127	+166	0	+115	+440	-83	-140	-76	-16					
4		-274	-64	-255	0	+64	-134	+115	-121	+19	+64	+268	+471	+147	+70	-255	-197	-127	-115	-121	-127	+51	0	0	+25	-21					
5		-178	-70	-13	-51	-102	-115	-197	-197	-223	-51	+197	+573	-89	-115	-121	+191	-306	-197	-64	+115	+357	-178	+185	-76	-30					
6		-19	-172	-25	-127	-312	-204	-134	-166	+38	+242	+185	+115	+57	-108	-64	-140	-96	+64	+115	+51	+25	-13	-64	-121	-36					
7		-64	-166	+166	-115	-25	-76	-70	0	+64	+121	+191	+96	+51	-235	-185	-38	+51	+13	+51	+70	+45	-13	0	-19	-4					
8	X	-38	-197	-134	-197	-255	-108	-70	+185	+102	+191	+64	-19	-57	-32	+76	+19	-140	-115	-19	-57	+70	+51	-38	-78	-33					
9		-38	-51	-121	-64	-57	-325	+64	-70	+121	+64	+191	+185	-70	+51	-153	-64	+51	-51	+376	+433	+153	+127	+389	+331	+61					
10	X	+248	+191	+127	+204	+191	+197	+306	+64	+51	-57	+115	+197	+236	+185	+255	+121	-51	+134	+191	+178	+191	+172	+121	+64	+151					
11	X	+38	0	-13	+127	+70	+13	+153	+127	+70	+89	+134	+178	+70	-25	-13	0	+57	+83	+89	+255	+140	+197	+19	0	+77					
12	X	-51	0	+64	+76	+70	+127	+115	0	+76	+185	+306	+255	+51	-13	-178	-127	-115	+115	-127	-70	+64	+121	+134	+134	+50					
13		+248	-13	-121	-204	-83	-134	+229	-140	+217	+433	+471	+541	-38	+64	+89	+115	+76	+580	+153	+452	-395	-51	-76	-13	+100					
14		-210	+76	-178	+255	+389	+191	-64	+357	-134	+76	+261	+567	+561	+452	+127	-325	-293	+115	+127	+64	+96	+242	-376	+134	+105					
15		+121	+115	+64	+115	+76	+115	+51	+70	+76	+134	+191	+242	+115	+127	+51	-255	0	-51	+318	+662	+605	-197	+115	-382	+103					
16		+134	+76	+64	+102	+51	+76	+19	+57	+25	+70	+115	0	+64	+242	+127	-64	-134	-147	+115	+172	+134	+89	+140	+255	+74					
17		-223	-459	+38	-57	+70	+96	+51	+51	+140	+191	+318	+19	+140	+261	-51	+338	-395	0	+147	+197	+64	+255	+306	+102	+105					
18		-153	+51	+357	-70	+197	0	+115	-159	+140	+191	+115	+338	+178	-64	-134	+242	+96	+127	+153	+172	+140	+185	+64	-51	+93					
19		-51	+153	+83	+115	+153	+127	+191	+325	+178	+255	+204	+134	-38	-83	-153	-115	-57	0	+25	0	0	+51	+70	-13	+65					
20	X	-13	0	+25	+13	-25	+127	+115	+70	+140	+134	+197	+140	-57	-140	-197	-306	-191	0	+89	+102	+115	+64	+178	-51	+22					
21	X	+70	+64	+64	0	-64	-19	+64	+64	+229	+204	+185	+127	+57	-70	-217	-127	-121	-64	+57	+191	+185	+115	+57	0	+44					
22	X	0	-76	-70	-140	-147	0	-134	+19	+121	+357	+261	+121	+51	-153	-185	-134	0	-51	+70	+153	+115	+19	+134	+19	+15					
23		-134	-134	-115	-172	-134	-331	-70	-64	+32	+248	0	+255	+217	+64	+306	+51	+248	-229	+127	+191	+115	+127	-115	-45	+18					
24		-159	+185	+255	+140	+586	+115	+363	+306	+248	+503	+554	+191	+280	+121	-13	+70	0	+64	+70	+134	+210	+255	+64	+127	+235					
25		+70	-76	+134	0	+51	+127	+19	+127	+134	+268	+325	+204	+134	+64	0	-64	+19	0	+127	+64	+127	+287	+248	+115	+104					
26		+127	+70	+134	+70	+57	+102	+127	-102	-57	+127	+178	+255	+242	+45	+134	+395	0	+134	+669	+102	+51	-38	+115	+51	+124					
27		-64	0	-64	-178	0	-115	+325	+127	+115	+127	+178	+306	+268	0	-76	0	+306	-140	+127	+191	+255	+153	0	+178	+84					
28		+51	+127	+261	+108	+217	+172	+127	+134	+185	+223	+312	+389	+89	-121	-134	-115	+191	+255	-115	+127	+83	+134	+64	0	+115					
29	X	+13	-127	-25	0	+51	+32	0	+51	+115	+236	+70	+76	+76	-121	+344	-32	-70	0	+13	+64	+57	+89	+13	+64	+41					
30	X	+57	+127	+83	+13	+121	-70	+64	-25	+102	+140	+115	+64	-64	+25	+191	+248	+13	+127	+172	+51	+13	0	+25	0	+66					
31	X	0	0	-51	-64	+57	+13	+51	0	+261	+325	0	+64	0	+153	+64	0	-96	-38	+51	+64	+64	+83	+127	+96	+51					
MEANS		-28	+14	+12	+17	+68	+7	+84	+71	+95	+177	+205	+183	+97	+28	-12	-25	-33	+26	+91	+141	+95	+95	+46	+6	+61					
MEANS 10 DAYS		+32	-2	+7	+3	+7	+31	+66	+56	+127	+180	+145	+120	+36	-19	+14	-34	-71	+19	+59	+93	+101	+91	+77	+25	+49					

= 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JANUARY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JANUARY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LENGTH IN KMS 93.9										DIRECTION E 0°.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		+ 70	0	+ 64	+178	+134	+134	+115	- 64	+ 89	+127	+ 64	+204	+134	- 25	-178	-191	+121	+ 51	+134	+ 83	+134	+ 64	-159	+108	+ 58						
2		-255	+ 89	+242	- 76	- 83	- 64	-325	- 76	+248	-433	- 51	+197	+713	- 76	+121	-255	-191	-166	+178	+255	+ 25	+452	+382	+115	+ 40						
3		+325	+191	- 25	- 64	-287	- 13	-115	-127	-631	-134	+242	+344	+306	+ 70	+225	+121	- 51	- 32	+ 83	+223	+395	- 57	-446	-229	+ 5						
4		-172	-318	+ 19	-102	-242	-414	+102	+535	-318	+ 64	+217	+376	+261	+115	+ 25	- 89	- 64	+ 89	+255	+280	-204	+312	+ 64	+115	+ 38						
5		-452	+185	+178	+153	+ 51	0	- 96	+127	+255	+197	+382	+688	+ 64	-185	-115	- 51	+ 89	-153	- 32	+147	+140	+255	+ 96	-102	+ 76						
6		-178	-159	-102	- 57	-134	-153	0	0	+ 70	+159	+223	+497	- 64	- 51	+121	+268	-108	-185	-255	+ 96	+102	- 64	-299	+ 76	- 8						
7		+ 19	+ 64	+ 64	- 76	0	-178	+178	0	+197	+242	+344	+395	+255	- 64	-325	-306	-127	+ 13	0	+ 70	+ 64	+ 76	+ 64	0	+ 35						
8		0	+ 57	+ 64	+ 64	+ 38	+ 64	+ 64	+134	+248	+274	+433	+389	+185	- 51	-318	-440	-510	- 45	+185	+ 19	+ 76	- 70	- 57	- 38	+ 32						
9		+ 57	- 38	- 57	- 13	- 13	0	- 64	0	+140	+268	+223	+255	+ 64	-134	-115	-287	+115	+134	-185	- 32	+185	+293	+140	+ 64	+ 42						
10		- 25	- 51	-134	-204	-153	-134	- 32	-178	+ 70	+159	+255	+318	+115	- 76	-159	-166	-185	- 13	+ 76	- 57	- 32	+ 51	+121	-318	- 31						
11		+191	-153	+ 57	- 64	- 64	-223	- 13	- 64	+102	+382	+478	+331	0	-140	-248	-223	-134	-108	+ 38	+ 32	+ 51	- 32	- 32	- 64	+ 4						
12		+ 51	-197	-178	+ 38	+ 19	- 57	-159	+ 25	+204	+446	+599	+363	-159	+127	-363	-465	-147	- 64	-127	-108	0	- 64	+13	+ 70	- 6						
13		- 57	- 13	- 70	-115	-147	-242	- 45	+ 25	- 57	+318	+484	+312	+ 13	-204	-197	-229	-217	-325	-248	-121	0	-115	+13	- 38	- 53						
14	X	0	- 51	- 13	- 38	- 70	- 51	0	- 70	+ 38	+121	+306	+166	+ 70	- 70	0	+ 89	- 51	-134	- 51	- 38	+ 70	- 25	- 13	-134	+ 2						
15		+127	+ 64	+185	-210	-121	- 64	0	-471	-382	- 51	+242	+121	+127	+ 70	+115	+102	+ 76	+121	+ 76	+147	+ 13	- 70	-153	+140	+ 13						
16		+ 76	+147	- 64	-255	- 51	-115	- 70	+ 57	- 70	+255	+255	+ 83	- 13	-115	-127	+191	+140	+376	+178	-197	+ 57	- 25	+299	+255	+ 63						
17		-217	+535	-605	+357	+ 76	- 70	-115	- 13	+ 51	- 51	+ 38	- 64	-255	-255	- 96	-166	+115	+274	+707	+956	-204	-134	- 51	+127	+ 39						
18		+ 83	-204	+ 76	-318	-134	- 51	-121	- 32	+242	+363	+121	-134	-331	+242	+478	+191	+178	+261	+ 13	-395	+ 45	+650	-191	- 76	+ 40						
19		-344	-197	+ 64	-197	-172	-115	0	+ 64	+127	+127	+ 70	- 76	-134	-134	- 70	- 51	+121	+191	- 70	- 76	- 13	0	0	- 51	- 39						
20	X	- 89	-121	- 51	-127	-127	- 64	- 13	+ 19	+140	+516	+446	+134	-248	-446	-503	-357	- 57	+ 64	- 25	0	- 57	- 51	- 64	0	- 45						
21	X	0	-191	0	-127	- 70	-140	-115	+147	+197	+344	+318	- 64	-414	-280	-331	-204	- 57	- 64	- 76	+127	+191	+255	+ 64	-185	- 28						
22		-178	-153	-306	- 51	-191	- 64	-318	+121	+115	+369	+312	+115	-127	-280	- 96	- 64	+153	+248	+115	+ 57	+121	-242	- 64	+178	- 10						
23	X	- 70	+ 38	-191	- 76	-121	-191	-140	-166	- 45	+293	+382	+197	-121	-268	-287	-229	+ 45	0	- 51	- 25	0	- 64	- 70	- 48							
24	X	- 96	- 57	- 64	-204	0	- 70	- 64	+ 64	+248	+420	+395	+102	-338	-357	-159	- 25	+ 13	0	- 83	- 13	- 70	0	- 51	- 19							
25	X	-121	-127	+ 57	+ 64	-312	+127	- 57	+ 64	+178	+255	+318	+153	+ 64	-248	-223	- 76	- 38	- 70	- 76	- 64	+ 13	+ 32	+ 51	- 32	- 3						
26	X	-127	- 76	- 57	0	-140	- 57	-166	-108	0	+127	+255	+134	+ 51	-153	-191	-127	- 83	- 13	0	- 25	- 51	- 64	- 25	- 64	- 40						
27		- 64	-134	-127	- 19	- 64	- 51	- 76	-115	0	+ 25	+ 51	+ 64	+ 38	+115	+121	+191	-153	+178	+ 57	+261	+178	-166	+153	-357	+ 4						
28		+376	- 64	- 38	- 45	- 51	- 25	-204	+ 51	0	+134	+261	+134	0	+ 51	-204	-178	-178	+ 51	+ 51	+ 38	0	+ 13	+13	- 51	+ 6						
29	X	-127	-102	- 64	- 64	- 76	- 64	- 89	-236	-147	+ 64	+178	+191	+242	+ 70	- 51	-127	-127	0	+ 51	- 25	0	0	+ 51	- 64	- 22						
30	X	-127	-140	-197	- 64	-134	-108	-185	- 64	+ 64	+197	+331	+102	-255	-408	-389	-255	+ 64	+ 64	+ 76	+ 70	+ 19	+ 96	0	- 70	- 55						
31	X	-127	- 70	+ 13	-204	- 83	-127	-134	- 57	+ 57	+268	+306	+127	-153	-376	-268	-127	0	- 64	- 64	+ 13	0	+ 64	- 70	-115	- 50						
MEANS ALL DAYS		- 47	- 40	- 41	- 62	- 88	- 83	- 73	+ 13	+ 46	+192	+286	+199	+ 3	-114	-121	-114	- 40	+ 22	+ 30	+ 50	+ 40	+ 46	- 7	- 28	+ 1						
MEANS 10 DAYS		- 88	- 90	- 57	- 84	-113	- 74	- 96	- 41	+ 73	+260	+324	+124	-110	-254	-240	-144	- 29	- 22	- 30	+ 2	+ 12	+ 31	- 12	- 78	- 30						

* = 10 LEAST DISTURBED DAYS

TABLE 297

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTH-EAST										DIRECTION N 17° 8' E														
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-135	-178	-116	-129	-61	-147	-129	+61	+110	+270	+172	+55	-215	-245	-208	-239	+172	+184	+190	+233	+123	0	-49	-239	-22
2		+61	-257	+306	-116	-18	-74	+37	-61	+227	+129	+172	-61	-294	-178	-123	-25	+172	+61	+74	+18	-86	-37	-233	-208	-21
3		+49	-178	-18	-49	-61	-61	+12	-49	+178	+190	+110	-116	-294	-239	-159	-159	-61	+110	+12	0	0	-49	-104	-159	-46
4	X	-190	-202	-49	+49	-43	-116	-55	+74	+184	+215	-98	-251	-172	-86	-129	-202	-37	+67	+37	0	+74	+368	+313	+104	-46
5		+31	-98	+55	-834	+270	+184	-215	+67	-61	-12	+172	+67	-392	-196	+74	-172	-49	+80	+245	+564	+233	-435	-196	+49	-24
6		-61	-349	0	-74	-680	+343	+306	+208	+294	-680	+184	+129	-233	+178	+233	+300	+104	-49	+313	-55	-184	-86	-61	-245	-7
7		-123	-233	-178	-251	+55	+67	0	+61	+178	+233	+49	-245	-368	-104	-86	-61	0	0	0	+61	-31	-61	-67	-98	-50
8		-86	-61	-67	-86	-251	+147	+55	+196	+306	+196	+80	-239	-411	-245	-129	+61	+55	-55	-67	0	+49	0	-61	-61	-28
9	X	-12	+135	-116	+98	-61	-104	+12	-116	0	+147	+116	-123	-264	-288	-251	-135	+12	+18	+110	+104	+123	+123	0	+31	-18
10	X	-153	-74	-49	0	0	-25	-368	-67	+362	+417	+202	-110	-257	-503	-123	-12	+141	-61	+166	-110	+12	+37	+74	0	-21
11		0	-12	0	0	+49	-215	-80	-239	-172	-147	-67	+43	-61	+49	+98	+49	+123	+123	+123	+12	+67	-55	-86	-74	-20
12		-61	-67	-18	-12	-67	-49	-55	+98	+172	+61	-61	-178	-245	-67	-49	-55	-80	0	+184	+417	-306	-166	-129	-123	-36
13	X	+67	-67	-55	-37	-18	+37	-61	-110	-129	-61	-49	-67	-43	+86	+74	+110	+123	+25	+80	+67	+31	-37	-31	-92	-7
14	X	-116	-49	-190	+227	+116	+80	+123	+251	-215	-49	-184	-245	-300	+43	-55	+300	+417	+184	+227	+202	+178	-61	+184	+50	+47
15		-282	+86	-233	+61	0	-92	+196	+104	-116	-208	-141	-245	-257	-98	+55	+190	+306	+61	-98	+49	+18	+123	-300	+190	-26
16		-331	+55	+251	+270	-245	-25	-31	-147	-257	-221	-319	-356	-184	-6	+245	+294	+61	-49	+184	+356	+123	+98	-25	-337	-25
17	X	-172	-43	-25	-116	+61	-18	+92	-55	-129	-123	-245	-349	-147	-18	0	+110	+110	+61	+123	+215	0	+245	+61	-37	-17
18	X	-74	-92	-110	-55	-49	0	+61	+184	0	-215	-398	-331	-245	-135	+61	+104	+61	-6	0	+49	+61	0	0	-31	-48
19	X	-92	-116	-67	-55	-12	0	+227	+294	+147	-153	-325	-398	-288	-141	-86	+18	+110	-55	+61	+55	+110	+31	-49	-67	-35
20		0	-215	0	+61	+86	+123	0	+313	+123	-337	-349	-405	-356	-178	-196	-129	+123	+147	0	+153	+31	+270	-31	-135	-38
21		+110	-98	-166	-37	-49	0	+460	+123	-172	-172	-37	-166	-313	-184	-49	-141	-49	+184	+49	+159	+61	+184	+49	-178	-18
22		-49	-92	-80	+74	0	+12	0	+129	+61	-74	-368	-294	-61	-92	+12	+104	+98	+172	-61	-61	+245	+61	0	+61	-8
23		+61	-123	-43	-74	-61	-61	-484	+821	+319	-398	-55	+454	+147	+337	+539	+362	-356	+25	+797	-497	-74	-92	-98	-153	+54
24		-411	-417	+509	+98	+116	-61	-12	+190	-98	-245	-306	-325	-184	-12	+282	+288	+123	+184	+221	-43	-110	0	-116	-61	-16
25		-92	-208	-86	-18	0	+25	-98	+92	-257	-74	-190	-306	-123	+178	-98	+239	+687	-129	0	+12	+123	+178	+74	-67	-6
26		-61	-31	+6	-43	+61	+61	+129	+233	+190	-147	-313	-184	-208	-123	+61	+190	+178	+67	0	+18	+74	-74	-49	-49	-1
27	X	-61	0	-123	0	0	+61	+67	-74	-190	-356	-306	-245	-294	+80	+86	+86	+362	+196	+110	+98	+184	-18	0	-61	-17
28		-264	+153	+25	+98	-12	-166	+98	+736	-447	-368	-61	+31	+110	+129	+135	+55	-49	+61	+61	-12	+67	+25	-61	-80	+11
MEANS ALL DAYS		-87	-101	-23	-34	-31	-3	+10	+118	+22	-78	-93	-159	-213	-74	+8	+55	+102	+57	+112	+74	+43	+20	-35	-74	-16
MEANS 10 DAYS		-94	-69	-90	-2	-7	-23	-3	+44	+14	+9	-112	-206	-222	-121	-63	+14	+147	+61	+110	+91	+90	+68	+50	-34	-14

= 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

FEBRUARY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

FEBRUARY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD																	LENGTH IN KMS							DIRECTION E. 0° 5' N							MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1	X	-162	-208	-143	-143	-130	-208	-123	-52	0	+260	+312	+350	+71	-156	-201	-312	+130	+71	+182	+324	+58	+13	+58	-467	-20							
2		+350	-260	+344	-149	+110	-71	+123	+195	-65	+182	+201	+130	-143	-130	-136	0	+130	-65	-58	-78	-143	+91	-337	-117	+4							
3		+65	-149	-52	-104	-71	-39	-117	-195	-71	+201	+312	+130	-58	-13	-123	-208	-136	0	-58	-52	-26	-78	-97	-136	-45							
4	X	-201	-188	-71	+58	-58	-156	-123	-149	-78	+182	+227	-39	-65	-65	-91	-266	-13	0	-78	-52	+130	+389	+296	+123	-8							
5		+71	-52	-91	-506	-273	-65	-52	-65	-175	+110	+324	+383	-500	-78	+156	-208	-162	+52	+396	+675	-143	-175	-195	+52	-16							
6		-169	-299	-78	-136	-318	-65	+318	-117	+415	-182	+370	+415	-234	+195	+312	+266	-208	-52	+273	-104	-208	-78	-201	-182	-3							
7		0	-182	-169	-182	-110	-71	-52	-58	+52	+253	+149	-123	-253	-71	-84	-136	-52	0	0	+13	-39	-32	-58	-130	-56							
8		-71	-52	-110	-84	-247	+58	-65	0	+71	+260	+227	-45	-292	-221	-175	-26	+13	-65	-52	-45	0	-19	-71	-39	-44							
9	X	0	+78	-162	+52	-130	-58	-65	-266	-71	+195	+247	+39	-117	-195	-273	-214	-149	-84	+65	+65	+117	+136	-13	-71	-36							
10	X	-182	-117	-143	-110	-84	-45	-389	-279	+97	+565	+312	+162	-45	-312	-65	-52	+292	-65	+84	-78	-117	-32	0	-201	-34							
11		+13	+19	-52	-78	+26	-260	-65	-247	-299	-162	+182	+312	+104	+117	+130	0	-78	-13	+123	-110	+19	-78	-71	-84	-23							
12		-65	-117	-91	-65	-149	-65	-123	0	+13	+26	+71	-32	-195	-110	-104	-117	-143	-52	+130	+104	-195	-97	-136	-104	-67							
13	X	+52	-136	-117	-117	-78	-78	-110	-162	-143	-58	0	-13	-78	-84	-130	-78	+162	+39	+52	+58	0	0	-65	-143	-51							
14	X	-162	-84	-227	-52	-84	0	+149	+428	+117	+292	+260	+84	-91	+97	-52	+324	+493	+441	+247	+195	+195	+91	+188	+78	+122							
15		-65	+84	-130	0	+78	-78	+324	+110	+117	0	+162	+324	-370	-266	-71	+117	+305	+130	-123	+71	+130	+110	-65	+461	+56							
16		-136	+123	+422	+312	-143	+117	+117	+260	0	+78	-71	0	0	+65	+363	+247	+97	+221	+500	+909	+195	+545	+227	+13	+186							
17	X	+117	+182	+156	-91	+143	+97	+188	+149	+143	+78	-58	-188	0	+65	-19	+110	+195	+195	+227	+266	+117	+318	+312	+110	+117							
18	X	-45	-65	-78	+32	+65	+136	+143	+312	+260	+149	-6	-52	-123	-123	-6	0	+45	+65	0	+19	+45	0	+19	0	+33							
19	X	-78	-78	-65	-71	-65	-65	+195	+305	+227	-58	-156	-208	-195	-45	-58	-78	0	-65	+123	+123	+136	-156	+130	+182	-1							
20		+130	-84	0	+39	+123	+123	+52	+175	+247	-175	-136	-156	-188	0	-143	-39	+260	+195	-169	+253	+350	+389	-162	-52	+43							
21		+58	-71	-52	-52	-84	-58	+273	+39	-39	-52	+78	+110	-91	-117	+13	-123	+104	+130	+110	+208	+117	+208	+65	-195	+24							
22		+78	-130	-195	0	-78	-45	+39	+65	+149	+65	-182	-58	+117	-13	0	+260	+104	+448	-130	-84	+143	+143	-52	+65	+30							
23		+65	-78	+65	-26	+117	+130	-312	+1362	+786	-195	+350	+876	+493	+733	+759	+182	-396	0	+383	-454	-84	-143	-117	-286	+175							
24		-597	-188	+740	-52	-71	-65	-130	+188	+162	-130	-149	-318	-52	0	+331	+260	+84	+324	+324	+104	-136	-19	-65	-71	+70							
25		-65	-214	0	-130	0	0	-71	+91	-65	-91	-45	-286	+13	+279	-247	+175	+824	-415	-71	0	+188	+227	+117	-117	+4							
26		-136	-65	-71	-130	-52	-65	-13	+123	+110	-52	-136	-58	-136	-188	-52	+123	-39	+52	0	0	+136	+13	0	-117	-31							
27	X	-78	-19	-123	-130	-32	+65	+32	-104	-312	-188	-65	+58	-58	+136	+195	+383	+610	+305	+266	+208	+389	+156	+39	-117	+67							
28		-474	+65	-234	-188	-136	-286	-123	+650	-506	-324	-331	-143	+312	+318	+188	+52	-247	-260	-65	0	+78	+58	+78	+58	-52							
MEANS ALL DAYS		-60	-82	-26	-75	-62	-35	+1	+106	+40	+44	+87	+59	-78	-6	+15	+22	+79	+55	+96	+91	+52	+71	-3	-53	+14							
MEANS 10 DAYS		-74	-64	-97	-57	-45	-36	-10	+18	+24	+142	+107	+19	-70	-68	-70	-18	+176	+90	+117	+113	+107	+92	+106	-51	+16							

* = 10 LEAST DISTURBED DAYS

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		-171	-183	-164	+85	-128	-67	+61	+49	+256	+536	-256	+49	-463	-268	-55	-49	+79	-79	+1060	-713	-792	-402	-134	-298	..
3		+49	-67	-773	+304	+12	-475	+669	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	-67	
4		..	..	..	..	..	..	..	+116	-72	-55	-110	-560	-481	+61	-73	+189	+122	-79	-164	-55	0	+122	-183	+560	..
5		+79	-244	-268	-128	-250	-298	+49	+164	-262	+414	+560	-298	-432	+122	+189	-238	+110	0	+597	+146	+451	-201	-792	+219	-13
6		-30	-463	-437	+67	-244	+110	-67	+347	+286	-110	-140	-304	-353	-256	-128	-231	+177	+128	0	-201	-73	0	-43	+183	-76
7		-116	-128	+238	-231	-548	+238	+146	+183	-85	-189	-438	-396	-317	-256	+73	+286	+97	+238	+268	+1364	-223	-451	+61	-110	-16
8		+116	+49	-122	-183	-365	-189	+85	+311	0	+61	+67	-298	-250	-116	+61	+244	+49	+639	+810	+244	+505	+158	-414	+61	+53
9		+116	-154	-256	-238	-49	-122	+146	+225	-140	-97	-365	-293	-280	0	+177	+676	-311	-213	+61	+91	-24	-177	-55	-61	-55
10		-122	-146	-171	-134	-432	-61	+171	+110	-225	+110	-122	-329	-499	-97	-97	+225	+61	+91	+280	+152	0	-274	+627	-164	-44
11	X	+49	-244	-128	-110	-183	-73	+73	+122	-61	-134	-177	-304	-244	-128	+61	+128	+61	-61	0	-85	-146	-110	-55	-61	-76
12		-61	+85	-177	+49	-116	-79	+61	+396	-30	-420	-566	-432	-201	-12	+50	+256	+189	+438	+219	-49	+609	+158	-378	-353	-15
13		-164	+67	-152	+134	+195	-1017	+195	+213	+414	+43	-116	-256	-128	-37	+481	+49	+67	+134	+353	-49	+24	-164	+67	+67	+12
14		-231	+737	-61	0	-560	-183	+195	+659	+432	-217	-231	-183	-171	-122	0	+73	+487	-183	-304	-122	-110	-12	-37	+61	-8
15	X	0	-91	-134	-183	+85	+158	-171	-184	+122	-146	-110	-244	-268	-61	-49	+231	+183	+110	-67	+12	-55	-55	-67	-18	-27
16	X	+55	-24	-73	-79	-67	+61	+231	+265	+504	+110	-290	-467	-501	-393	-102	+125	+188	+102	+330	-119	+57	-74	-40	+74	-9
17	X	-68	-148	+63	-205	-51	+57	+176	+233	+199	0	-347	-398	-279	-228	-46	-68	+46	+182	+119	+57	+17	0	-51	+51	-29
18		+51	-131	+57	+171	-273	-80	+63	+148	+182	-279	-216	+74	-102	-148	-279	+40	+46	+63	-63	-46	+80	+68	+307	-102	-15
19		-176	-279	+108	-68	+159	+182	+336	+478	+444	-165	-865	-102	-171	-284	+148	-63	+398	+569	+148	+404	-302	+74	-364	+159	+32
20		-751	-46	+182	-171	-171	-57	+250	+410	+387	+193	-307	-558	-563	-415	-330	-171	+57	-12	+91	+626	+176	+11	+176	+694	-12
21		+17	+398	-819	+165	+34	-119	+46	+239	+233	+102	-347	-632	-512	-393	-284	-57	+176	+171	+461	-182	+228	+393	-102	-347	-47
22		-57	+46	-51	-512	-57	+239	+239	+256	+530	+40	-148	-267	-427	-399	-421	-74	+193	+57	0	+125	+171	-273	-108	-46	-48
23	X	0	-68	-74	-17	-68	+114	-57	+634	+341	-108	-177	-463	-297	-103	-120	-160	+166	-120	+46	+97	+183	+217	-108	-34	-2
24	X	-268	-114	-171	-343	+114	+46	+171	-63	+148	+40	-11	-63	-114	-240	-228	-217	-126	+57	+63	-11	0	-11	-46	+97	-62
25		0	-69	0	-365	0	-57	+240	+423	+228	-183	-400	-251	-137	-69	-46	0	-114	+46	-46	-46	-80	-63	-11	-286	-54
26		-57	+46	-851	+885	+308	+188	+171	+131	+794	-108	-137	-280	-188	-69	-51	-46	-200	-108	+57	+217	+251	+46	-126	-103	+21
27	X	-114	-57	0	-17	-74	-6	+160	+343	+223	0	-320	-308	-281	-183	-120	-63	-46	-11	-69	-11	+46	+64	-63	-46	-40
28	X	-29	-51	-69	-63	-69	0	+160	+817	+411	0	-234	-297	-423	-348	-240	-171	-57	-102	-166	-57	+274	+725	-228	-166	-24
29		+57	0	-274	+171	0	-46	-223	-592	+640	+463	+69	-126	-171	-63	-57	-114	-29	-51	+46	+97	+23	-183	-114	-17	-17
30	X	-103	-69	-114	-63	-63	+46	+297	+63	+303	-183	-337	-405	-114	-120	+63	+148	+120	+57	+11	0	+57	+228	-120	-137	-18
31	X	-69	-120	+57	0	-46	-114	+206	+520	+348	-108	-405	-377	-331	-63	-137	-91	-251	-206	+171	+337	+137	-63	-291	-400	-54
MEANS ALL DAYS		-73	-48	-140	-50	-104	-40	+122	+248	+222	-20	-227	-292	-294	-170	-53	+24	+65	+69	+121	+98	+69	+6	-86	-54	-25
MEANS 0 DAYS		-55	-99	-64	-109	-42	+29	+125	+306	+234	-53	-241	-333	-286	-187	-92	-14	+28	+1	+44	+22	+57	+93	-107	-77	-34

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EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MARCH 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MARCH 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2		-121	-89	-191	-89	+121	-140	+64	-89	0	+306	-236	+121	-401	-268	-76	-115	-45	-166	+306	-325	-573	-369	-45	-178	..
3		+45	-102	-344	+121	+159	-389	+446	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4		..	..	..	..	..	..	..	+191	+108	+197	+331	-338	-497	+178	-153	+191	+185	-115	-134	-64	+13	+96	-178	+675	..
5		+134	-255	-76	-153	-140	-299	-19	-127	-229	+790	+1956	+172	-382	0	-121	-306	-57	-51	+242	-13	+248	-64	-389	0	+36
6		+89	-338	-382	0	-32	+13	+83	+255	+115	-89	-51	-134	-172	-172	-197	-318	+197	+115	+64	-236	-38	+64	-89	+115	-47
7		-134	-13	+127	-70	-318	-57	-70	+25	-57	+32	-306	-236	-197	-408	+115	+197	0	+325	+454	+1299	-414	-331	+64	-134	-2
8		+178	0	+70	-204	-344	-70	-51	+127	+121	+64	+312	-115	-268	-350	+395	+280	-70	+248	+344	+522	+656	-624	-612	-115	+21
9		+108	-127	-344	-306	-57	-76	-127	-115	-217	-64	+13	-127	-51	+64	+274	+541	-172	-420	-57	+70	-51	-242	-76	-96	-69
10		-102	-197	-121	-204	-344	-344	+19	+134	-140	+38	0	-185	-484	-38	-153	+185	+51	+178	+382	+178	+255	-885	+707	+76	-41
11	X	+25	-268	-153	-134	-197	-115	+13	+51	-19	-115	-127	-185	-127	-76	-121	-115	+38	0	+51	-83	-127	-76	-13	-64	-81
12		+32	+70	-242	-64	-115	-127	+64	+255	+13	-312	-446	-325	-102	0	+32	+242	+153	+656	+446	-204	-688	+134	-338	-376	-52
13		-191	-51	-363	+153	+223	-510	-115	+83	+261	-76	0	+147	+64	0	+459	-274	-236	+64	+440	-57	-172	-134	+153	-261	-16
14		-318	+701	+115	-89	-204	-248	-45	+376	+446	-312	-191	-76	-134	-140	-115	-45	+236	-121	-325	-153	-83	+57	-45	0	-30
15	X	-115	-57	-140	-172	+38	+83	+140	+70	+191	+178	+197	-64	-204	-57	+13	+134	+166	+115	-45	+13	-19	-51	0	+64	+20
16	X	-70	+70	-19	-25	+57	+121	+191	+369	+414	+248	-38	-114	-190	-241	-152	0	-32	+63	+203	0	-57	-108	+70	+120	+37
17	X	+76	-133	-13	-203	0	+114	+196	+247	+196	+51	-241	-196	-51	+76	-70	-114	+57	+89	+63	44	0	0	-63	+57	+4
18		-70	-253	-101	+127	-51	-101	-51	+171	+291	+70	-108	+209	+127	+184	-114	-19	-127	-196	-127	-38	+101	+133	+177	0	+60
19		-215	-335	-70	-114	+63	+114	+127	+443	+386	+203	-443	+310	+342	-279	+323	-114	+500	+551	-127	-316	-13	+133	-538	+57	+41
20		-652	-196	-13	-190	-253	-133	+76	+260	+316	+241	-51	-234	-228	-329	-386	-266	-120	-184	+19	+589	+298	-51	+82	+443	-40
21		+95	+190	-443	-177	0	-177	+63	+209	+247	+342	+108	-253	-177	-184	-367	-127	+171	+63	+190	-209	+184	-76	-196	-525	-44
22		-127	-51	-127	-323	-108	+63	+82	-57	+108	+6	0	+127	0	-152	-184	-13	+127	-76	-89	-51	+63	-247	-177	-63	-53
23	X	-51	-133	-177	-45	-196	+127	-133	+405	+437	-51	0	-254	0	+267	-64	+64	0	-222	-178	0	+121	+127	+64	+51	+7
24	X	-273	-197	-254	-375	+83	+51	+70	-51	-64	-108	0	+76	+197	-51	-152	-203	-76	+51	+70	-25	0	+146	-51	+64	-45
25		+127	-25	+70	-298	+114	0	+311	+298	+273	-64	-171	-13	+76	0	0	-38	-190	0	0	-70	-76	-64	+25	-292	0
26		0	-83	-730	+508	+552	+114	+298	-229	+762	+559	-57	-51	+178	+121	+64	-64	-216	-76	-64	+190	+381	+70	-178	-190	+77
27	X	-178	-146	-57	-70	-127	-57	-19	+254	+190	+64	-190	-121	-64	+83	-13	-190	-190	-190	-133	-76	0	+76	-64	-70	-54
28	X	-64	-76	-133	-83	-127	-51	+64	+318	+241	-64	-114	+51	-133	-152	-190	-197	-140	-229	-311	-178	+241	+603	-133	-311	-49
29		-95	-64	-267	+190	0	-64	-127	-343	-184	+210	+64	+235	+254	+204	-51	-210	-121	-127	0	+25	-64	-204	-13	-152	-22
30	X	-165	-83	-146	-64	-76	0	+178	+102	+114	-64	0	-121	-127	-152	+64	-6	-140	-140	-51	-70	0	+117	-127	-184	-44
31	X	-159	-235	-57	-76	-133	-178	+133	+254	+178	-127	-121	-51	-51	+216	-204	-318	-337	-216	+89	+394	-64	-375	-171	-381	-83
MEANS ALL DAYS		-80	-85	-151	-91	-56	-70	+51	+132	+170	+70	0	-50	-52	-66	-35	-50	-20	+4	+52	+50	+20	-62	-69	-82	-21
MEANS 10 DAYS		-97	-126	-115	-125	-68	+10	+83	+202	+188	+1	-63	-98	-75	-9	-89	-94	-65	-68	-24	-7	+10	+54	-49	-65	-29

= 10 LEAST DISTURBED DAYS

* = 10 LEAST DISTURBED DAYS

APRIL 1942

APRIL 1942

TABLE 301
EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY
EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-63	+165	-57	+46	+108	+159	+290	+495	+171	+114	-68	-228	-245	-223	-165	-80	0	+68	+131	-11	+57	-165	-125	-57	+13
2		-199	+193	+489	-51	-586	+142	-364	+60	+467	-119	-165	+171	+159	+290	+74	-51	+159	-171	-102	+159	+273	+876	+91	+296	+112
3		+40	+171	-247	-284	-353	-103	-108	-114	-290	-74	-330	-211	-381	+46	+68	+68	-228	+63	+250	+171	-154	-279	+211	+1832	-14
4		+257	+245	+256	-415	+296	+663	+259	+387	-324	-63	+114	-637	-176	-228	-63	+114	+216	+171	0	+11	+347	-102	-68	-137	-21
5		+17	-119	-455	+171	+222	-46	0	+154	+253	-80	-188	-239	-137	-159	-284	-159	+57	+222	+57	+119	+262	-137	-171	-114	-32
6	X	-119	-63	-165	-63	+159	+119	+119	+176	0	-193	-182	-171	-68	-233	-114	-114	-68	+57	+68	-22	-57	0	+57	0	-37
7		-154	-125	-108	-63	-57	-125	+171	+256	+114	-176	-279	-125	-63	-159	-132	-222	-148	-68	-171	+119	+114	+290	-228	+222	-49
8		+711	+137	-302	-228	-137	-91	+222	+467	+108	-46	-398	-341	-171	-176	+102	+284	+273	+119	-114	+57	-46	+68	-171	-148	+7
9		-68	-11	0	-114	-171	+102	+236	+256	+102	-302	-512	-193	-63	-102	+68	-51	-63	+57	+63	0	0	+34	0	0	-28
10		-51	-57	-63	-46	-114	+57	+176	+387	+241	0	-347	-444	-410	-444	-159	+63	+159	+387	+296	+876	+245	-182	+74	-137	+25
11		-381	-848	+694	+740	+80	+370	+125	-233	+273	-171	-415	-324	-256	-74	0	+176	+159	+171	+57	-80	-63	-74	0	-57	-5
12		-57	-63	-11	-74	-119	0	+176	+688	+159	-182	-677	-455	-294	-108	+68	+46	+279	+102	-17	-119	-74	-68	+102	-108	-33
13		-46	-176	-11	+102	+63	+216	+637	+182	+341	-247	-455	-398	-228	+119	-188	+410	+296	+331	+1019	+284	-620	-91	+159	-455	+89
14		-239	-46	-176	-182	-17	+102	+267	+273	+238	-165	-353	-398	-363	-182	-57	+176	+159	+222	-57	-57	0	-11	0	-57	-34
15		-51	+74	-57	0	-63	-57	+171	+279	+273	-57	-410	-546	-427	-228	+68	+28	+114	0	-57	+171	+46	+63	-330	+319	-28
16		-455	-330	+341	0	+68	+159	+347	+398	+228	-63	-337	-569	-455	-387	-165	-46	+171	+626	+728	+1758	-455	-68	-171	+666	+81
17		-290	+68	+1047	-461	+438	+171	+398	+222	-62	+57	-432	-495	-293	-290	-165	+57	+216	+171	+250	+302	-302	+57	+171	-222	-66
18		+427	-40	-239	-267	+125	+176	+294	+228	+119	+358	+256	+57	+499	-267	-290	+222	+125	+102	+216	+97	+114	-51	-57	+80	+54
19	X	-57	-262	-626	+114	+154	+68	+182	+518	+410	+472	-296	-580	-512	-455	-233	-63	-102	+302	+205	+228	-137	0	-171	-63	-38
20	X	-91	-74	-46	0	-23	-171	+57	+341	+626	+410	-176	-353	-284	-455	-216	-165	+57	+119	+114	+68	-119	-11	-57	-68	-22
21	X	-114	-63	-68	-34	-17	-23	+239	+347	+114	-216	-518	-615	-307	-307	-68	+57	+176	+273	+97	+137	-119	+11	+11	+23	-41
22	X	+46	+11	-46	0	-11	+63	+307	+415	+330	-102	-455	-569	-444	-279	-176	-63	+125	+171	-11	0	-51	-165	-114	+63	-40
23		-259	-85	-114	+63	+302	+512	+216	+683	-216	-211	-290	-330	-279	-102	+91	-57	+353	+791	+336	-216	-97	-46	-211	-11	+35
24	X	-188	-46	-398	+63	+302	+182	+228	+284	+51	-233	-273	-296	-222	-46	-63	-51	-68	+57	+57	+57	-51	+23	-68	+46	-27
25	X	-40	-46	0	-40	+23	+74	+228	+273	+125	-165	-398	-410	-171	-119	-216	-108	0	+176	+114	+46	+57	+137	+57	+63	-14
26	X	+57	+46	0	+74	0	+57	+176	+284	+216	+57	-159	-398	-330	-284	-171	-57	+57	+46	+108	+57	-11	-46	-97	-57	-16
27		-119	-125	+63	-46	0	-63	+279	+341	-154	+199	-137	-233	-324	+63	+57	-290	+296	+637	+1246	-398	+63	-176	-284	-176	+30
28	X	-137	-171	-228	-114	0	+57	+211	+330	+341	-80	-228	-319	-284	-290	+28	-74	-171	+182	+171	+228	-102	-11	-46	-137	-35
29	X	-228	-68	-57	-23	+57	+63	+245	+307	+176	0	-387	-523	-296	-176	-185	-102	+108	+40	+63	+40	-51	-68	-46	-11	-46
30		-222	-57	-11	-51	+154	-347	+512	+245	+307	+159	+108	-171	-290	-159	-182	-324	-119	-108	+108	+284	+154	+307	+512	+131	+39
MEANS ALL DAYS		-119	-59	-93	-39	+29	+79	+211	+316	+166	-41	-281	-345	-273	-181	-70	-13	+86	+211	+174	+146	-26	+4	-32	+57	-5
MEANS 10 DAYS		-87	-74	-163	-2	+64	+49	+199	+328	+239	-6	-307	-423	-292	-264	-139	-74	+11	+142	+93	+84	-64	-13	-47	-14	-31

* = 10 LEAST DISTURBED DAYS

TABLE 302

APRIL 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT					LINE		LENGTH IN KMS					DIRECTION					E. O. S. N							
		EASTWARD					OW	93.9					E. O. S. N													
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-190	-70	-190	-88	0	-13	0	+442	+253	+215	+145	+70	+38	-114	-171	-177	-183	-82	0	-82	-32	-310	-25	-126	-29
2		-322	-114	+430	-171	+101	+360	-259	+240	+562	+32	+164	+354	+442	+379	+177	-259	-51	-310	-190	-25	+442	+303	+449	-51	+112
3		+139	-133	-303	-398	-367	-190	-284	+76	-398	-101	-63	+51	-480	+196	+107	+196	-436	-63	322	+286	-278	-335	+177	+878	-59
4		-436	-63	-57	-531	+19	+670	+171	+322	+202	+562	+607	-88	-177	-455	-114	+19	0	+51	-152	-145	+32	-177	-19	-152	+4
5		-82	-215	-316	-183	+76	-76	+63	-51	+44	-76	-76	-13	+63	-107	-272	-202	-196	+76	-76	-19	+70	-13	-70	-139	-75
6	X	-171	-133	-190	-70	0	-63	-63	+57	-76	-177	0	+70	+145	-114	-76	-196	-202	-63	0	-89	-63	-51	-70	0	-66
7		-152	-63	-13	-38	+51	-126	+120	+190	+76	-44	0	+145	+51	0	-63	-177	-120	-63	-51	+562	+303	+120	-253	+335	+32
8		+360	+480	+63	0	+57	+114	+316	+714	+177	+259	+164	+303	+133	-114	+145	+196	+209	+240	0	+76	-51	0	-322	-32	+146
9		-133	0	0	0	+63	-44	+316	+265	+177	-316	-341	0	+76	+114	+202	-114	-133	-13	+38	-13	-63	+57	-13	-63	+3
10		-63	-114	-107	-63	-114	-57	+114	+310	+196	+76	-145	-38	-133	-316	-145	+152	+265	+562	+562	+1018	+253	-581	+367	-449	+65
11		-720	-335	+468	+758	-107	+171	+613	-430	+259	-114	-183	-126	-190	-76	-152	-63	-63	+139	+51	-57	+51	+101	+95	+19	+5
12		+63	+13	0	+139	+145	+202	+209	+645	+310	+82	-139	-63	-57	-82	-101	-177	+152	-13	0	-70	-70	0	+76	+51	+55
13		+32	-183	-82	+133	+63	+253	+752	+354	+695	0	-133	-284	+63	+354	-190	+689	+202	+512	+134	+379	-664	-183	-177	-202	+159
14		-246	-101	-234	-221	-133	-19	+114	+32	-57	+133	-51	0	-171	-63	+51	+70	+63	+114	-114	-114	-51	-13	+51	-57	-42
15		-76	+13	-120	-51	-133	-76	+38	+171	+253	+139	-82	-196	-126	-51	0	-70	-51	-63	-13	+196	+126	+190	-695	+493	-8
16		-221	-246	+190	-13	0	+63	+177	+158	+190	+82	+120	-70	-164	-120	0	+133	+316	+581	+194	+259	-335	+38	-392	-133	+75
17		+215	-63	-632	-386	+126	-13	+70	+746	+152	+265	-240	-310	-303	-133	-82	-70	+139	+76	0	-310	+177	+101	-126	-25	-26
18		+322	+51	-101	-114	-70	+82	+265	+246	+133	+379	+550	+506	-367	-57	-253	+120	+120	+51	-126	+133	+202	-202	+70	+51	+83
19	X	-51	-196	-518	+63	-114	-51	-63	+177	+341	+392	+114	-126	-13	-386	-228	-126	-133	+164	-63	0	-70	-88	-70	-76	-47
20	X	-63	-120	-51	-63	0	-310	-114	+70	+379	+594	-51	+70	+126	-228	-183	-196	-76	-13	-38	-63	-114	+13	-70	-82	-24
21	X	-114	-70	-114	-63	-70	-82	0	+259	+63	-190	-265	-215	-133	-196	-133	-51	+63	+164	-51	0	-164	0	-51	-57	-61
22	X	-51	-70	-126	-70	-133	-139	+63	+316	+329	+82	-196	-265	-190	-190	-101	-82	+63	+114	0	0	0	-139	+25	+101	-27
23		-228	-126	+253	+70	+265	+746	+246	+683	+335	+228	+360	+196	0	-190	+221	+190	+506	+455	+259	-101	-316	+82	-126	+133	+173
24	X	-133	+63	-354	+114	+190	+126	+51	+329	+120	-70	0	-76	0	+114	+57	0	-126	-13	-63	-19	-57	0	-76	0	+7
25	X	-95	-76	-63	-82	-76	-44	+107	+202	+120	-44	-183	-253	-114	-63	-209	-133	-25	+126	0	+13	+70	+164	+51	+25	-25
26	X	-70	-19	-114	-57	-82	-70	+38	+76	+63	+126	+114	-126	-190	-316	-240	-139	+19	0	+82	+51	-63	-63	-133	-120	-51
27		-202	-164	+63	-63	+63	-63	+114	+190	+32	+335	+240	+152	-120	-171	-63	-272	+645	+942	+192	-765	-126	-51	-253	-291	+56
28	X	-202	-259	-329	-126	-76	-70	+51	+265	+253	-51	-70	-51	-164	-114	+126	-70	-297	+63	+44	+19	-164	0	-51	-133	-59
29	X	-354	-63	-133	-76	-107	-63	+51	+209	+183	+76	-190	-297	-209	-120	-13	+70	+70	-57	-126	-70	-139	-139	-126	-13	-68
30		-322	-139	-76	-152	+82	-432	+234	+196	+177	+259	+310	+177	-164	-88	-133	-259	-145	-145	+126	+303	+228	+297	+562	+70	+41
MEANS ALL DAYS		-119	-84	-92	-60	-9	+26	+117	+249	+184	+104	+16	-17	-77	-90	-61	-33	+20	+118	+138	+44	-29	-29	-40	-2	+11
MEANS 10 DAYS		-130	-94	-190	-43	-42	-77	+12	+196	+178	+74	-73	-127	-74	-161	-100	-92	-64	+48	-22	-18	-76	-30	-57	-36	-42

* = 10 LEAST DISTURBED DAYS

TABLE 303

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTH-EAST										LENGTH IN KMS										DIRECTION N 17° 8' E									
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		+147	-108	-113	+45	-317	+68	+147	+57	-57	-108	-187	-266	-170	-192	-238	-187	-57	+125	+147	+28	+113	-79	+153	-147	-50					
2		-125	+158	+125	-430	+266	+136	+85	+147	-28	+226	-57	-289	-266	-147	-170	-125	-102	+204	+209	+102	0	+102	+57	-119	-2					
3	X	-119	-158	0	-142	+62	+102	+153	+198	+204	+96	-158	-323	-317	-283	-306	-266	-96	+57	+142	+108	+108	+57	-68	-40	-41					
4		+170	-51	-68	-23	-57	+113	+289	+515	+781	-232	-770	-594	-345	-306	+85	+125	+91	+238	+809	+68	+181	+317	+226	-187	+57					
5		+85	-192	-657	+142	+102	+28	+221	+170	-147	-294	-492	-419	-289	-170	-11	-34	+102	+136	+34	+113	+62	-74	+158	-175	-67					
6		+170	+130	-51	+45	-74	-62	+23	+96	-181	-340	-396	-424	-340	-57	+119	+187	+226	+153	-17	-57	-68	+68	+119	+108	-26					
7	X	+17	-62	+23	-11	-328	+164	+277	+300	+113	-226	-481	-453	-175	-226	-51	+68	+74	+28	-11	+34	+113	-142	-57	-51	-44					
8		-85	+34	+11	+28	+51	+96	+136	+272	+62	-351	-453	-566	-294	-130	+272	+187	+136	+51	0	-62	-68	0	+62	+170	-18					
9	X	-62	+136	+57	+113	0	+85	+260	+142	-204	-509	-509	-345	-34	+62	+125	+153	+221	+57	-23	+238	-57	-102	-130	-19	-19					
10		-57	-91	-57	-68	+68	+147	+226	+408	+181	-181	-526	-419	-334	-385	-249	-198	+34	+306	+57	+34	+23	-175	-68	+130	-50					
11	X	0	+119	0	+108	+28	+204	+289	+311	+119	-175	-334	-243	-136	-221	-113	-57	+51	+158	+57	0	0	-57	-68	-40	0					
12	X	-68	-17	0	+57	+34	+238	+345	+419	+91	-419	-640	-521	-243	-68	0	+170	+289	+175	+158	0	0	-102	-119	-40	-11					
13		-51	0	+57	+62	+130	+170	+396	+351	+119	-430	-662	-657	-289	-91	+130	+226	+181	0	-238	-170	-334	-96	+923	+679	+17					
14		+764	+158	+453	-209	-74	+170	+362	+266	+62	-391	-719	-906	-566	-226	-91	+68	+255	+221	+74	+68	+283	+272	+113	0	+17					
15		+57	+40	-328	-170	+57	+238	+385	+317	+226	-136	-385	-464	-317	-340	-170	-57	+226	+68	+91	0	0	+11	-130	-102	-37					
16		-175	0	+113	+125	0	+45	+170	+226	+272	-130	-226	-351	-272	-130	-277	-57	-46	+277	+181	+57	+192	-74	-113	-113	-13					
17	X	-57	-181	+57	0	-34	+113	+317	+362	+289	-198	-413	-385	-492	-340	0	+68	+215	+192	+266	-170	+113	-11	0	-23	-13					
18		-125	-46	-68	-617	+340	+164	+255	+340	+198	-215	-441	-289	-317	-79	-57	-68	-40	+108	+102	+96	-46	-51	-57	-57	-40					
19		-74	+62	0	-46	+57	+136	+113	+249	+164	+74	-175	-306	-379	-238	-289	-215	-51	+102	+113	+51	+57	+57	+102	+164	-21					
20		+317	-130	-62	-204	+68	+62	+159	+204	-68	-328	-362	-311	-272	-181	+136	+368	0	+142	+623	+498	-396	-158	-34	-85	-1					
21		-68	-51	0	-57	+158	+113	+187	+396	-45	-175	-215	-226	-226	+40	-74	+170	+91	+119	+113	-57	-102	-142	0	+147	+4					
22		+113	+368	-192	-62	+45	-62	+226	+396	+226	-102	-221	-345	-464	-119	0	+170	+198	+340	-158	-57	-158	-57	-125	-45	-4					
23		-170	-181	+17	0	-74	+170	+272	+368	+181	-397	-516	-470	-170	-130	+204	+91	+62	0	+11	-62	-11	+159	-96	-153	-37					
24		-113	-113	-62	-45	-68	+227	+340	+272	+136	-493	-408	-386	-289	-170	+113	+255	+238	+108	-170	-113	-45	-96	-57	-45	-41					
25	X	-57	-11	-153	+164	+170	+181	+125	+227	-176	-391	-522	-386	-221	-113	+125	+193	+238	+62	-45	-125	-57	0	+17	-31						
26	X	+57	+62	+68	+119	0	+113	+181	+227	-57	-380	-544	-414	-147	+68	+164	+170	+119	+113	-57	-113	-187	-85	-11	-159	-29					
27		-91	-102	-96	+442	+703	+318	+198	-584	+79	-113	-607	-125	-62	-119	+329	+595	+176	+119	-28	0	+153	+431	+595	+431	+110					
28		-295	-108	-510	+266	+119	+62	+45	+238	+74	-340	-522	-374	-340	-45	+96	+369	+340	+170	+125	0	-102	-68	-45	+91	-31					
29		-23	-244	+96	+113	+102	+272	+318	+306	+68	-369	-471	-397	-471	-272	+40	+147	+215	+244	+397	+142	-113	-164	-136	-45	-10					
30	X	+57	-318	+164	+227	+164	+170	+391	+403	-23	-414	-584	-556	-340	-125	+23	+226	+266	+113	+57	+57	-45	-62	-113	-62	-14					
31	X	-17	-113	+102	+198	+113	+170	+318	+295	-11	-346	-465	-556	-363	-119	-102	+255	+386	+306	+108	+28	-57	-68	-57	+62	+3					
MEANS ALL DAYS		+4	-33	-35	+5	+58	+137	+233	+255	+85	-251	-434	-412	-288	-157	-8	+97	+130	+145	+101	+24	-14	-13	+33	+6	-14					
MEANS 10 DAYS		-25	-54	+32	+83	+21	+154	+266	+288	+34	-296	-465	-418	-247	-136	-14	+98	+176	+126	+65	+6	-7	-57	-62	-47	-20					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

MAY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

MAY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										93.9 DIRECTION F. O. 5. N.										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1		-338	-50	-207	-13	-313	-63	-63	-94	-56	-69	0	-88	-75	-150	-188	-113	-63	+50	+69	-25	+63	-81	-382	-250	-104								
2		-100	+75	+144	-557	+188	+63	+69	+169	-50	+275	+38	-175	-150	+63	0	-63	+75	+63	+200	-56	-56	-106	-326	-19	-10								
3	X	-163	-56	-106	-119	+13	-69	-119	+13	+119	+125	-50	-250	-182	-188	-169	-244	-156	-63	0	+50	+169	-119	-188	-119	-78								
4		-44	-50	-144	-138	-144	+63	+69	+213	+376	+69	+332	-263	0	+351	+382	+282	+63	+244	+426	+56	-131	+156	+50	-376	+49								
5		-194	-326	-438	-182	0	-63	+13	+138	-113	-188	-200	-269	-244	-175	+75	-44	+131	+263	+69	-13	-163	-81	-319	-182	-104								
6		+125	+19	-188	-63	-125	-200	-113	-25	-169	-125	-131	-300	-376	-63	+175	+150	+156	+106	-50	-63	-125	+81	+88	-131	-56								
7	X	-31	-63	-113	-94	-263	-63	+63	+238	+175	-100	-332	-194	-63	-200	-50	+63	+69	+63	-56	+125	-63	-113	-56	-106	-48								
8		-131	-56	-19	0	-50	-50	-44	0	-56	-188	-238	-369	-175	-81	+131	+207	+75	-38	-63	-125	-113	+44	+75	+125	-47								
9	X	-213	+19	+44	+13	-106	-63	+56	+63	-131	-269	-313	-219	-63	0	+63	+19	+131	0	-13	+207	-150	-81	-200	-194	-58								
10		-125	-169	-182	-125	-63	+63	+113	+250	+138	-188	-326	-125	-188	-363	-200	-275	+119	+344	-13	0	-119	-200	-125	+56	-71								
11	X	-69	+63	-125	0	-63	0	+63	+175	+194	+50	-131	-75	-144	-188	-94	-175	-63	+88	+13	-69	-50	-69	-113	-63	-35								
12	X	-119	-88	-56	-88	-13	+50	+250	+388	+175	-163	-326	-369	-257	-56	+69	+188	+200	+125	0	-69	-63	-125	-194	-13	-23								
13		-100	-69	-63	-56	0	0	+156	+250	+119	-250	-319	-388	-257	-175	0	+75	+56	-75	-307	-250	-357	-63	+939	+926	-9								
14		+620	-106	+476	-88	-50	0	+188	+275	+113	-182	-438	-588	-351	-188	-106	-31	+113	+31	-63	-50	+182	0	+219	0	-1								
15		-113	-56	-250	-225	-63	-56	+69	+144	+188	0	-188	-250	-75	-94	-113	-63	+125	+13	0	-44	0	+38	-100	-138	-52								
16		-169	-69	+69	+44	-63	-125	-63	-56	-50	-38	-63	-125	+63	+94	-244	+50	0	+194	-13	0	+119	-106	-119	-169	-35								
17	X	-131	-200	+50	-50	-106	-81	+100	+188	+106	-138	-158	-113	-307	-188	0	+50	+69	+56	+169	-175	0	-50	-19	-113	-43								
18		-125	-63	-150	-557	+238	-106	+19	+188	+213	-69	-207	-106	-175	+106	-50	-106	-88	0	0	+75	-69	-63	-75	-144	-55								
19		-38	-88	-125	-75	-44	-75	-125	+50	+119	+81	-50	-81	-188	-50	-131	-75	-94	-63	+13	-13	-13	-63	-113	+150	-45								
20		+25	-69	-131	-225	-81	-150	-156	-182	-188	-119	-44	-13	-63	-106	+131	+470	-169	+56	+444	+250	-219	-169	-75	-144	-39								
21		-125	-131	-81	-119	-13	-69	-56	+156	-50	-69	-182	-131	-113	+75	-19	+244	-44	-50	-25	-182	-56	-169	-56	+69	-50								
22		-244	+632	-50	-75	0	-63	+44	+232	+138	+69	0	-50	-150	+119	-169	+125	+56	+175	-238	-119	-194	-75	-113	-44	0								
23		-194	-175	-69	-56	-188	-69	-56	+113	+169	-174	-242	-124	0	-12	+304	+74	-56	-186	-56	-112	-62	+161	-124	-130	-53								
24		-81	-136	-112	-143	-124	-12	+124	+192	+260	-174	-149	-112	-149	-205	-25	+130	+112	0	-242	-105	-12	-81	-136	-62	-52								
25	X	-68	-124	-161	0	+19	-37	0	+149	-81	-180	-205	-186	-130	-56	+68	+124	+124	-50	-62	-136	-81	-56	-87	-62	-53								
26		-130	-43	-68	+19	-62	-12	-25	+112	-118	-260	-316	-291	-143	+62	+186	+143	+50	0	-43	-125	-192	-149	-68	-223	-71								
27	X	-192	-298	-167	+180	+496	+236	+62	-316	+62	+205	-260	+124	+267	+74	+440	+546	-186	-19	-174	-186	-273	+347	+310	+453	+72								
28		-384	-50	-397	+124	0	-37	+62	+74	+186	-223	-248	-186	-316	-68	-198	+229	+87	+62	+174	0	-260	-130	-174	+248	-59								
29		-31	-248	0	-50	-12	+74	+124	+248	+124	-298	-192	-112	-347	-186	+62	+62	+12	+174	+304	+43	-62	-198	-186	-99	-33								
30	X	-105	-285	+37	+130	0	-68	+124	+329	+124	+198	-180	-248	-229	-186	-136	+62	+242	+12	0	-99	-74	-87	-180	-105	-47								
31	X	-74	-310	+112	+74	-62	-19	+74	+143	-37	-254	-174	-304	-236	-68	-174	+62	+62	+174	-19	-37	-68	-112	-99	0	-56								
MEANS ALL DAYS		-99	-83	-80	-81	-34	-32	+33	+123	+64	-98	-192	-193	-155	-68	+1	+70	+39	+56	+14	-40	-80	-55	-63	-28	-41								
MEANS 10 DAYS		-110	-109	-39	-12	-64	-36	+59	+180	+53	-139	-219	-225	-175	-107	-24	+29	+73	+40	-11	-33	-57	-96	-120	-100	-51								
		★ = 10 LEAST DISTURBED DAYS																																

TABLE 305 EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JUNE 1942
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
JUNE 1942

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-68	-57	-40	-137	+97	+114	+216	+393	+347	+11	-489	-740	-630	-478	-267	+34	+239	+307	+171	+74	+91	+46	0	-11	-32
2	X	-63	-68	-51	-46	+68	+159	+290	+193	+125	-74	-216	-267	-341	-290	-216	-114	-57	+114	+114	-46	-108	-57	-57	-119	-47
3		-63	-228	-176	+171	+228	+302	+330	+205	+273	-222	-566	-518	-307	-176	-34	+284	+114	+342	+102	-57	0	+11	0	0	+3
4		-165	-11	-102	+40	0	0	+171	+57	-102	-137	-228	-228	-341	-353	-284	+63	+182	+273	+176	-114	+57	-63	-131	+119	-47
5		+176	+284	+171	-176	+63	+57	+159	+182	-165	-569	-478	-444	-421	-182	+119	+228	+279	+296	+17	+57	+91	-17	+165	+102	0
6		-199	-211	-23	-324	+546	+119	+290	+256	0	-398	-688	-427	-262	+57	+97	+114	+142	0	-119	-125	+216	+114	+121	+176	-22
7	X	0	+114	+57	+11	+68	+97	+216	+250	+131	-216	-523	-569	-438	-205	-74	+51	+188	+119	+205	0	-233	+46	+63	-68	-30
8	X	-46	+74	+40	+57	+102	+193	+381	+171	0	-154	-489	-398	-228	-17	-63	-46	+102	+114	+57	-57	-34	-51	+46	+63	-8
9	X	-131	-114	-28	+28	0	+37	+279	+284	+216	-68	-293	-546	-455	-267	-205	-57	0	+57	+102	-11	-63	-68	-91	-57	-62
10		-24	-40	-34	-28	0	+57	+307	+370	+341	-279	-603	-467	-347	-219	-165	+28	+68	-114	+23	-68	-68	-74	-57	+518	-41
11		-228	-176	-57	+193	+404	-205	+688	-193	+740	-28	-546	-284	-211	-46	+51	+296	+434	+681	+51	-159	-154	-137	-228	+63	+39
12		-20	-28	-199	-235	+256	+358	+415	+450	+233	-125	-700	-751	-353	-68	+182	+199	+125	+176	+603	0	-273	-91	-159	+74	+3
13		-11	0	-518	+131	+102	+267	+501	+353	+637	-34	-683	-506	-387	-74	-307	+262	+154	+114	-68	+114	-68	-267	+228	-429	-23
14		+28	-273	-114	-17	+256	+228	+216	+484	+188	-40	-370	-472	-353	-171	0	+159	+74	+85	+95	+216	-40	-182	-159	-455	-26
15	X	+114	-51	-68	-165	-182	+171	+302	+239	+114	-102	-393	-341	-228	-290	-131	-57	+108	+137	+57	+11	+34	+57	+46	-68	-29
16		-137	-228	+63	+182	+74	+222	+319	+23	-228	-472	-455	-307	+57	-102	-11	-28	+23	-68	+57	+108	+284	+250	+57	-154	-20
17		-228	+51	+159	-267	-171	+80	+85	+159	-51	-114	-228	-398	-455	-211	-57	+193	+336	+307	+273	-154	0	-131	-114	-154	-45
18		-46	-91	-154	+108	+80	+171	+341	+154	0	-199	-284	-296	-267	-267	-182	-57	0	+11	+57	-97	-57	-80	-125	+11	-53
19		-63	0	-63	+11	+57	+241	+91	+165	+415	+267	-119	-552	-131	0	+228	-34	-63	-137	+28	+121	+501	+51	-176	-302	+13
20		-171	-11	-102	0	-108	+159	+63	+131	-74	-171	-250	-290	-341	-176	-125	-11	+171	+159	+159	+57	+171	+80	-68	-228	-41
21	X	-284	-182	-114	-57	-40	+63	+171	+91	-17	-62	-171	-313	-273	-233	-131	-63	+46	+57	0	-46	-40	-68	-97	-57	-76
22	X	0	-63	-148	0	0	+97	+114	+205	+148	-46	-427	-472	-410	-256	-63	0	+108	-11	-119	-171	-114	-57	0	+137	-64
23		+46	0	+17	+102	+171	+68	+137	+211	+171	+62	-384	-848	-407	-232	+85	+170	+458	+542	+525	+209	-170	-339	-119	-170	+13
24	X	-170	+73	+198	+203	+158	+85	+316	+316	+56	-390	-689	-751	-520	-186	-119	0	+292	+288	+260	+373	+11	-34	-107	-260	-25
25		-175	-79	0	+17	+56	+158	+254	+271	-79	-282	-627	-616	-266	-119	+11	+277	+203	+119	-102	-51	-113	+113	-119	-107	-52
26		-102	+90	+11	+158	+113	+124	+288	+68	-34	-390	+17	+418	-339	-90	+193	+203	+192	+232	0	0	0	+147	-147	-113	+44
27	X	+23	-68	+45	+113	+79	+220	+305	+226	-45	-220	-655	-667	-418	-68	+73	+226	+102	+62	-68	+56	+102	+68	-102	0	-25
28		+45	-96	+107	+56	+137	+277	+401	+333	-56	-497	-277	-706	-576	-215	+56	+11	+56	+328	+418	-85	+62	-90	-113	-11	-18
29		-605	+79	+119	0	0	-56	+130	+102	-170	-220	-452	-441	-672	-209	+56	+277	+311	+514	+215	+311	-305	+446	+277	+113	-8
30		-565	-706	-68	+211	0	+119	+480	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
MEANS ALL DAYS		-89	-45	-35	+5	+90	+139	+269	+201	+107	-178	-424	-455	-356	-181	-42	+90	+150	+176	+113	+16	-8	-13	-40	-50	-23
MEANS 10 DAYS		-62	-34	-11	+1	+35	+130	+259	+237	+108	-132	-444	-507	-394	-229	-120	-3	+112	+124	+78	+18	-35	-12	-30	-44	-40

* = 10 LEAST DISTURBED DAYS

TABLE 306

JUNE 1942

JUNE 1942

JUNE 1942

* = 10 LEAST DISTURBED DAYS

JULY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

TABLE 307

DAY	#	COMPONENT NORTH-EAST										LENGTH IN KMS										DIRECTION N 17° 8' E									
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		..	..	..	..	..	..	..	..	..	-248	-371	-310	-310	-62	-180	-173	-0	+93	+93	+62	+124	+161	-105	..	
2		-310	-198	-111	-43	-37	+68	+186	+50	+105	0	-291	-439	-248	-142	-186	-186	-130	+50	+186	-31	-111	-62	..	..				
3		..	..	..	..	..	..	..	+322	+248	-74	-198	-384	-359	-285	-56	+43	+124	+118	+62	+50	-62	0	-25	+68	..
4		+155	+68	+223	0	-12	+62	+173	+371	+248	-93	-508	-607	-520	-291	+25	+155	+210	+80	-130	-223	-74	-50	-43	-37	-34					
5	X	-37	+31	+80	-130	+31	+99	+248	+99	-130	-310	-328	-371	-291	-142	+87	+37	+130	-50	-118	-56	-105	+80	+12	0	-47					
6	X	-446	+241	+19	+43	-50	+62	+229	+297	+193	-192	-644	-433	-198	-223	-124	+254	+297	+62	-124	-111	-12	-19	-56	-229	-48					
7		+93	+62	+87	+31	-149	-99	+167	+235	+130	+161	+316	-173	-223	-310	-173	+316	+272	+130	+371	-118	-210	+68	+186	+378	+64					
8		-149	+582	-495	+130	+328	+130	+297	+248	-241	-322	-62	-192	-328	-266	+186	-173	+272	+105	+105	-310	-229	-50	-198	-62	-29					
9		0	+19	-62	-186	0	+136	+186	+285	+99	+186	-229	-966	-514	-409	+31	+371	+260	+328	0	0	+87	-74	-155	-124	-30					
10		-272	-62	-37	-87	-12	+93	+248	+248	+124	-130	-495	-607	-402	-334	-62	-136	+371	+520	+235	+310	-124	-136	+303	+347	-4					
11		+1108	+279	-1188	-526	+1040	-43	-285	+662	+118	+149	+167	+80	-136	-161	+365	+390	+248	+80	-31	+31	0	+248	+322	-353	+107					
12		+68	+62	+37	+458	-142	+371	+328	+248	+80	-19	-310	-433	-600	-297	-334	+80	+210	+248	-50	-186	+99	-186	-50	-223	-23					
13	X	+74	+68	-111	-124	+124	+142	+334	+291	+12	-266	-402	-371	-291	-62	+328	+458	+155	+198	+173	+149	-217	-19	+464	-334	+32					
14		-87	-62	-180	-62	+68	+87	+303	+155	+124	-470	-539	-402	-155	+111	+458	+111	-56	+118	+155	+105	+254	-12	+328	-142	+9					
15		-118	-470	-149	+124	+198	+105	+93	+186	-68	+310	-384	-718	-452	+105	+62	+235	+526	+328	+62	+192	-130	+50	+68	-111	+2					
16		-43	-266	-105	+328	-111	+93	+155	+124	+310	+167	+50	-371	-484	-495	+37	-31	+322	+495	-229	-167	+50	+291	-25	-161	-2					
17	X	-62	-266	-19	-93	-322	+291	+433	+254	+124	-37	-242	-272	-433	-285	-93	-149	+186	+310	+192	-173	-74	-56	0	+80	-30					
18	X	+118	-62	-56	-93	-186	+192	+192	+204	+291	-31	-316	-371	-303	-186	-62	+99	+99	+180	+50	+186	-173	-12	0	-25	-11					
19	X	-62	-37	-80	-87	0	+124	+328	+130	+58	0	-204	-248	-198	-223	+167	+56	+167	+62	-80	-118	-130	-105	-173	-136	-16					
20		-62	+68	+768	-285	+217	+347	+235	+217	+161	-37	-111	0	-402	-310	-62	+316	-173	+755	-149	-223	-248	+260	+62	-241	+46					
21	X	-291	-248	+124	+111	0	+186	+248	+161	+142	-229	-192	-180	-87	-235	-136	-111	+25	+62	+155	-180	-56	+12	0	-50	-32					
22		+99	+80	-12	+68	-68	-142	+124	+520	+186	+210	-186	-390	-421	-93	-136	-31	+124	+378	-68	-12	-50	0	0	+217	+17					
23		+25	-105	-161	-62	-50	+62	+260	+93	-149	-495	-198	+204	-74	+235	+427	-105	-124	-25	+74	-93	+316	+111	-124	-37	+0					
24	X	-155	0	0	-31	+62	+62	+310	+353	+130	-303	-520	-446	-371	-155	-25	+105	+322	+254	+433	-167	+19	+56	-124	-50	-8					
25		-87	-322	-198	+192	+161	-266	+198	-328	+161	-297	-334	-260	0	-186	+31	-25	+167	+111	+25	-62	-74	-50	-31	+37	-60					
26		-310	+50	0	+12	+80	+223	+186	+272	-56	-353	-489	-470	-427	-248	0	+557	+508	+310	+142	+237	+303	+62	+99	-928	-8					
27		+186	0	-68	+111	-186	-167	+402	+458	+260	-93	-74	-328	+582	+433	+1424	+1275	+433	+279	+19	+50	+136	-43	-93	+167	+231					
28		-155	-136	-167	-266	+248	+136	+371	+266	+260	+149	-378	-142	-470	-303	-136	+31	+198	+867	-210	+167	-223	-62	+142	-340	-6					
29		-167	+303	-50	+149	+118	+291	+347	+310	+248	-87	-303	-495	-495	-365	-19	+155	+433	+402	+248	+93	-62	-198	-192	-124	+22					
30	X	-173	+93	-340	+68	+124	+136	-50	+334	+186	-19	-124	-316	-446	0	+56	+136	-155	0	+99	-192	-80	-68	+303	-19	-19					
31	X	-130	-62	-322	+235	-74	+99	+180	+136	+93	+50	-56	-62	-173	+111	+371	+260	0	+62	+130	0	+186	-74	-25	-31	+38					
MEANS ALL DAYS		-31	-3	-88	+1	+65	+100	+223	+244	+125	-186	-254	-334	-296	-164	+96	+166	+194	+234	+55	-29	-29	+1	+36	-90	+6					
MEANS 10 DAYS		-116	-24	-70	-10	-29	+139	+245	+226	+150	-134	-303	-307	-279	-140	+57	+114	+123	+114	+96	-66	-64	-20	+40	-79	-14					

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

JULY 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

JULY 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE	OW	LENGTH IN KMS										93.9										DIRECTION E 0° 5' N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10			10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		+592	-428	+50	-485	+353	+57	+32	+38	0	-57	0	-13	-94	+63	+220	-94	-246	-63	-13	-13	0	+176	-139	-63	-5																		
2		-252	-176	-126	-63	-13	-19	0	-25	+145	+50	-82	-88	+107	+44	-139	-50	0	+57	+107	-76	-63	-101	+13	0	-31																		
3		+19	-82	-13	-202	-32	-25	+139	+189	+252	+69	-50	-189	-202	-202	+13	+19	+126	+107	+50	-13	-63	-63	-69	-13	-10																		
4		+25	-38	0	-19	-32	-50	-25	+126	+120	-151	-359	-378	-302	-189	0	+164	+195	+19	-170	-195	-101	-107	-113	-126	-71																		
5	X	-101	-139	+19	-176	-69	0	-25	+43	-126	-309	-252	-183	-189	+57	+176	-19	+189	+13	-126	-113	-132	0	-63	-50	-66																		
6	X	-485	+183	-76	-69	-176	-151	-13	+472	+340	-63	-328	-284	-151	-113	0	+340	+378	+126	-202	-113	+25	-57	-113	-403	-39																		
7		+50	-13	+43	-43	-107	-176	-132	+69	+63	+94	-202	-227	-107	-189	-195	+113	+107	+63	+485	-189	-233	-176	-233	-69	-50																		
8		-126	+391	-321	+57	+334	-38	+176	+189	-340	-189	+195	+340	+32	-271	+252	-227	+25	+32	+378	-825	+63	-126	-126	-151	-12																		
9		0	-19	-63	-176	-6	-25	+19	+208	+132	+441	+202	-643	-517	-252	+101	+302	+139	+315	-132	-113	-68	-82	-265	+63	-18																		
10		-220	-88	-63	-202	-158	-195	-63	+113	+202	+113	-220	-252	-164	-277	-57	-252	-195	+246	+951	+296	-290	-214	-523	+882	-26																		
11		+1071	-195	-718	-202	+869	-403	+32	+706	+63	+107	-94	-76	0	-239	+252	-239	-309	0	+63	+126	0	+195	+233	-813	+118																		
12		-76	-277	-164	+378	-252	+107	-132	+151	+202	+189	0	+94	-265	-208	-296	+107	+158	+233	-126	-214	0	-126	-189	-202	-38																		
13	X	+107	+101	-63	-113	+76	-13	+126	+126	-63	-252	-252	-57	+132	+25	+227	+139	+50	-113	+113	-19	-195	-19	+189	-189	-8																		
14		-69	-252	-107	-50	-94	-113	+82	-63	+107	-202	-195	-189	+38	+302	-227	+214	-246	-50	+69	+63	+208	-183	+441	-170	-34																		
15		-145	-441	+82	+69	0	+94	+101	+126	-63	+554	+88	-567	-296	+479	-265	+126	+302	+397	+214	+32	-170	-353	+220	-50	+22																		
16		+32	-346	-164	+132	+63	-145	-107	0	+265	+340	+220	-132	-195	-227	+265	-25	+258	+391	-252	-158	+50	0	-252	+94	+34																		
17	X	-57	-233	+113	+208	-76	+195	+252	+151	+63	-13	-44	0	-220	-120	+63	-132	+170	+315	+113	-158	-44	-63	-57	+13	+17																		
18	X	-170	+113	-63	-50	-132	-63	-69	+50	+183	-25	-202	-183	-13	-25	-50	+76	+113	+126	-44	-76	-88	-76	-38	-69	-32																		
19	X	-151	-113	-120	-126	-69	-13	+38	-94	+13	-145	-158	-189	-63	+132	+126	+63	+145	0	-145	-76	-120	-113	-189	-296	-69																		
20		-189	-252	+435	+19	+176	+158	+107	+176	+32	+13	+220	+189	-32	+290	+309	+441	-132	+359	-13	+50	-69	+170	+158	-94	+105																		
21	X	-252	-76	+132	+252	+69	+195	+202	+69	+126	-227	-126	0	+202	+132	+113	+63	+113	0	-44	-202	-63	+63	-132	-69	+22																		
22		-6	+126	+19	+82	-50	-94	-32	+76	+25	+158	+50	-94	-132	-113	-126	+25	+94	+277	-107	-57	+50	0	0	-19	+6																		
23		+170	-13	-170	-63	-44	0	+164	+63	-183	-334	+63	-145	+126	+189	+214	-76	-170	+19	+126	-132	+246	+233	0	-170	+5																		
24	X	-189	-19	-94	-82	0	-82	+88	+428	+145	-189	-252	-195	+13	-202	+107	+252	+472	+428	+189	-76	+50	-176	-50	-107	+19																		
25		0	-246	-195	+38	+220	-252	-277	-334	0	-183	-195	+139	+536	-183	+94	+101	+88	+44	0	+19	-69	-57	0	+57	-4																		
26		-220	0	0	-57	-50	+69	-57	+113	-63	-126	-239	-170	-50	-25	+365	+813	+44	+353	-113	-76	-189	-139	+416	-926	-14																		
27		+315	+50	-189	+214	+69	+38	+113	+170	+202	+252	+378	+195	-328	-63	+63	+38	+69	+265	-170	-208	+164	-410	-25	+372	+66																		
28		0	-82	-195	-252	+164	+82	+170	+189	+258	+548	-63	-391	-315	-139	-321	+63	+246	+630	-126	-25	-107	-63	-315	-328	-16																		
29		-88	+220	+126	+132	+25	+69	+176	+132	+145	+63	+50	-252	-365	-328	-132	+63	+302	+321	-76	0	+76	-13	-214	-126	+13																		
30	X	-271	+50	-69	-13	+13	+69	-176	+88	+113	+189	+265	-195	-208	+126	+189	+189	-76	+6	-252	-69	-82	-151	+315	+69	+5																		
31	X	-38	-82	-252	+113	-82	+38	0	0	+13	+38	+113	+126	-183	+76	-63	+120	+195	+315	+195	+53	-13	-139	+13	0	+24																		
MEANS ALL DAYS		-23	-77	-71	-24	-32	-22	+46	+121	+76	+24	-47	-120	-112	-47	+41	+88	+84	+169	+26	-82	-40	-70	-36	-96	-7																		
MEANS 10 DAYS		-161	-22	-47	-6	-45	+18	+42	+133	+81	-100	-124	-116	-94	+9	+89	+109	+75	+122	-20	-84	-66	-73	-12	-113	-13																		

* = 10 LEAST DISTURBED DAYS

TABLE 309

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT NORTH-EAST					LINE OM					LENGTH IN KMS					DIRECTION N 17° 8 E									
DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-25	-111	-62	+37	+56	+93	+185	+74	-124	-290	-124	-56	-80	+37	-56	-74	0	+25	-19	+43	+93	+148	0	-74	-13
2		-173	-37	-142	0	0	+142	+260	+655	+74	-575	-253	-62	-105	..	..	..	+426	..	+154	..	..	..	..	..	..
3		..	..	..	..	..	..	..	..	+192	-80	-80	..	-148	..	..	..	-12	+31	+62	+31	+62	-99	+74	+117	..
4	X	-31	-56	+12	-37	+80	+74	+198	+235	+87	-253	-433	-290	-167	-130	-25	-74	-130	-136	+56	-62	-62	-74	-179	-62	-61
5	X	-87	-37	+62	+173	+62	-173	+216	+328	+247	-173	-464	-371	-340	+62	+204	+25	+62	-105	-192	-74	-68	-74	-87	+111	-29
6		0	-68	-124	0	+62	-43	+501	+575	+297	-1014	-513	-445	-130	+49	-74	+216	+321	+315	-179	-68	-19	-49	-62	-216	-28
7		-111	+346	+56	-49	+247	+173	+185	+346	+192	-31	-247	-470	-303	+389	+124	+155	+93	-74	-25	+12	-173	-56	-37	-179	+23
8	X	-93	-43	-111	0	+68	+31	+185	+185	0	-321	-550	-494	-124	0	+247	+185	+179	-19	-222	-148	-12	-192	-148	-136	-64
9		-124	-130	0	0	-167	+99	+340	+377	-56	-358	-488	-501	-247	+167	+68	+235	-185	-111	+142	+19	+111	+148	+402	-396	-27
10		+290	-154	0	+19	-74	+192	+93	+544	+754	-501	-49	+241	-352	+210	+1304	+1032	+507	0	0	+37	+556	-371	+74	+68	+184
11		-742	-117	-173	+192	-309	+371	+494	+377	+192	-173	-470	-630	-358	-179	-49	+74	+297	+105	+37	+334	-124	0	+37	-297	-46
12		-266	+260	+179	-328	+130	+204	+173	+173	+56	-105	-451	-501	-365	-260	-56	+124	+290	+49	+136	-346	-117	-49	-124	-80	-53
13	X	-87	-173	-74	-43	+80	+117	+247	+402	-198	-428	-434	-471	-397	-193	+329	+298	+446	+273	+81	-291	-19	-124	-74	-174	-38
14	X	-236	-124	-25	+192	-186	+186	+496	+415	-62	-632	-632	-453	-248	-56	+106	+298	+198	0	-124	-130	-112	-93	-105	-112	-57
15		-124	-136	-62	-192	-12	-31	+236	+446	+192	-546	-552	-496	-180	+130	-74	-149	+260	+143	+25	+93	+459	+155	+186	-68	-8
16		-440	-310	-341	-56	0	+130	+353	+335	+329	-360	-397	-632	-763	+310	-310	+247	+546	+794	+68	+310	+136	-31	-205	-620	-34
17		-223	-186	+211	+248	-198	+155	+477	+589	+216	+50	-694	-446	-335	-304	+260	+298	+186	+186	0	+31	0	0	+223	-149	+29
18		+285	-322	-682	+620	+298	+62	+360	+794	+174	-149	-403	-353	-198	-74	+372	+97	+430	-93	-93	0	-50	-273	-124	-329	+17
19		+329	-837	+229	+601	+74	+81	+527	+527	+198	-130	-446	-391	-546	-136	+459	+366	-50	+242	+279	+347	-310	-136	-186	-217	+36
20		+31	-428	+335	-750	+378	+310	+248	+248	+360	+87	-68	-180	-81	-174	+99	+31	+186	-68	-174	+124	-130	-37	-12	-180	+6
21		+223	+62	0	+81	-186	+93	+533	+192	-174	-304	-285	-186	-74	+248	+174	+248	+223	-112	-242	+248	+174	-50	-56	+130	+40
22		-81	+50	-56	-192	+186	+124	+422	+353	+372	-527	-558	-446	-124	0	+192	+329	-50	+434	+496	-211	-490	+74	-143	-93	+3
23		-384	-50	+62	+552	-74	-12	+161	+310	+110	-713	-508	-62	+310	+130	+235	+305	-434	-304	-273	-236	-186	-440	+124	-19	+13
24		-186	-93	+50	0	+186	+242	+378	+670	+372	-242	-539	-558	-118	-198	-37	+279	-81	-62	-167	+223	+465	-87	-694	+465	+11
25		-620	-124	-105	+310	+186	+161	+446	+558	+335	-236	-558	-546	-291	-304	+167	+124	+130	+81	+186	+130	-248	-68	-372	0	-27
26		-124	-304	+174	+74	+186	+291	+335	+558	+205	-155	-570	-701	-378	-459	-298	+124	+279	+577	-161	-19	-68	-50	+161	-335	-27
27		-192	+186	-161	+68	+186	+174	+341	+366	+248	-50	-316	-347	-378	-248	+99	+229	+124	+19	-105	-68	+12	+13	-68	-353	-9
28	X	0	-415	+254	+186	+130	+105	+279	+422	+372	-167	-440	-601	-688	-465	+93	+434	+316	+186	-19	+50	0	-56	-56	-43	-5
29	X	-37	-192	-142	-68	+62	+149	+322	+521	+260	-310	-486	-453	-298	-192	0	+130	+124	+174	+62	0	0	-112	-62	-50	-25
30	X	-105	-97	-130	-143	-93	+62	+490	+608	+279	-341	-688	-360	-391	-304	-81	+136	+267	+285	-87	+174	+260	+366	-81	+248	+12
31	X	+74	-124	-174	-62	+43	+304	+167	+372	+130	-403	-620	-632	-372	-149	+155	+298	+186	+143	-37	-25	0	-68	0	-33	
MEANS ALL DAYS		-106	-128	-28	+49	+48	+128	+324	+410	+222	-303	-448	-408	-276	-72	+131	+231	+168	+101	-19	+17	+3	-54	-58	-109	-7
MEANS 10 DAYS		-63	-136	-39	+24	+30	+95	+278	+356	+99	-332	-488	-418	-310	-140	+105	+166	+165	+83	-50	+46	+8	-28	-79	-29	-31

* = 10 LEAST DISTURBED DAYS

TABLE 310

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

AUGUST 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

AUGUST 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	★	COMPONENT EASTWARD										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24							
1	X	-50	-88	-63	+44	+57	+126	+132	-63	-139	-202	+63	+88	+63	+50	+69	-63	+82	+50	-63	+246	+227	+63	+50	-57	+26						
2		-202	-76	-202	+50	+19	+126	+246	+410	+50	-403	-57	+13	0	+214	+378	+246	+176	+252	..	..	..	..	..	..	
3		..	..	..	..	..	..	..	..	+189	+50	0	-126	-113	-139	+94	-50	-94	+50	+233	0	-126	-63	+76	+63
4	X	+19	-13	0	0	+94	+132	+195	+151	+126	-164	-252	-107	+94	+82	+126	+13	-107	-132	-120	-76	-69	-13	-158	+44							
5	X	+82	+126	+76	+145	+101	-25	+126	+252	+233	0	-208	-126	-76	+50	+189	+32	+69	+32	-101	+19	+63	-38	-50	+183							
6		+82	-139	-32	+126	+101	+44	+378	+529	+441	-580	-132	-13	+50	+139	-69	+328	+668	+466	-19	+76	-151	+63	+32	-813							
7		+302	+378	+252	0	+447	+315	+176	+265	+32	-50	-139	-220	+13	+435	+346	+189	0	-195	-88	-76	-63	0	+69	-132							
8	X	0	+50	0	+120	+170	+126	+139	+202	+132	-44	-88	-145	+19	+126	+189	+258	+57	-176	-202	-113	0	0	-50	-94							
9		0	-120	-13	0	+309	+252	+189	+479	+126	-76	-32	-195	-189	+183	+139	-25	-189	-82	+239	+258	+189	+296	+334	-321							
10		+378	-76	-19	-50	-132	+139	-82	+447	+181	-378	+233	+819	-183	-113	+359	+176	+132	-25	+76	+63	+296	+50	+195	+239							
11		-504	+113	+69	+265	-151	+321	+441	+315	+246	+63	-139	-252	-126	+38	+126	+57	+183	+63	+63	+139	-19	+214	+126	-139							
12		-214	+202	+334	-126	0	+158	+145	+120	+132	+113	-120	-176	-44	-82	+25	+252	+309	+38	+63	-252	-19	+57	0	+48							
13	X	-63	-164	-69	-57	+50	+76	+126	+202	0	-63	-108	-292	-190	-63	+139	+190	+342	+171	+82	-178	-19	-63	-63	-133							
14	X	-197	-165	+19	+184	-76	+38	+203	+241	+13	-279	-247	-190	-120	+13	+178	+197	+133	0	-70	-69	-19	-57	-38	0							
15		-89	-70	-13	-247	-127	-95	+127	+311	+133	-317	-254	-418	+114	+495	+178	+95	+260	+178	0	+399	+507	+63	0	+114							
16		-380	-260	-330	-222	-152	0	+32	+235	+349	-70	0	-634	-476	+1084	-761	+317	+539	+615	+70	-203	-228	-247	-273	-444							
17		-238	+127	+82	+254	-70	-209	+152	+514	+399	+609	-190	-95	-279	-51	-70	+120	-63	-89	+32	-95	-38	-70	-114	-158							
18		+222	-311	-285	+355	+254	+82	+101	+634	-63	-120	-152	-184	+114	+146	+127	-158	+254	+76	+127	-317	-254	-51	-260	-266							
19		+197	-349	+197	+158	+317	+108	+127	+406	+399	+355	-57	-184	-583	-197	+634	+298	-241	+120	+266	+336	-355	-266	-82	-247							
20		+63	-330	+70	-437	+108	+165	+158	+139	+317	+76	-76	+139	-190	-190	0	+63	+63	-63	-19	+63	-190	-57	-38	-190							
21		+171	+51	-82	-51	-203	0	+330	+101	+44	-178	-235	-228	-133	+216	+70	+197	0	0	-95	-165	-228	-482	+216	+380							
22		-95	-32	-101	-127	+70	0	+241	+342	+32	-171	-304	-260	-127	0	+203	+304	-44	+133	+507	-38	-526	+190	-602	+82							
23		-514	-127	+51	+216	-51	-13	+89	+247	+1610	-139	-463	+266	+178	-82	+444	+1274	-691	-330	-317	-311	+63	-577	+32	+51							
24		-152	-82	0	-101	+114	+152	+254	+552	+450	+317	-139	-146	+190	-70	-444	+152	-152	-120	-254	+127	+387	-57	-761	+564							
25		-437	-108	-108	+139	0	0	+190	+228	+254	0	-266	-260	+63	+120	+241	-171	+13	-57	+133	+57	-190	-197	-203	+19							
26		-152	-254	+120	0	+19	+127	+197	+254	+311	+114	-95	-330	0	-304	-298	+76	+19	+533	-266	-127	-336	+32	+63	-437							
27		-101	+190	0	-76	+190	+95	+203	+304	+158	+82	-190	-114	-190	-82	-70	+13	+51	-57	-108	-76	+38	-63	-133	-311							
28	X	0	-241	+133	+133	+13	0	+32	+254	+317	+63	-76	-247	-406	-380	-76	+152	+63	+82	-38	0	-63	-70	-63	-63							
29	X	-57	-254	-190	-139	-120	-63	+19	+260	+146	-38	-76	-114	-70	-63	-114	-19	-51	+70	+70	-57	-25	-197	-51	0							
30	X	-120	-152	-190	-279	-190	-146	+133	+279	+184	-76	-292	+70	-184	-254	-133	+19	+127	+190	-133	+127	+323	+336	-158	+127							
31	X	-101	-127	-216	-171	-63	+95	+101	+203	+51	-247	-374	-342	-178	0	+127	+178	+82	+51	-120	-63	0	-63	-19	-19							
MEANS ALL DAYS		-67	-77	-11	+2	+38	+69	+160	+290	+249	-48	-152	-134	-98	+43	+65	+156	+66	+53	-210	-9	-24	-42	-69	-70	+16						
MEANS 10 DAYS		-49	-102	-50	-2	+4	+36	+121	+198	+106	-105	-166	-140	-105	-44	+69	+96	+80	+34	-70	-11	+42	-10	-60	-1	-5						

* = 10 LEAST DISTURBED DAYS

TABLE 311

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

SEPTEMBER 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY		COMPONENT NORTH-EAST										LENGTH IN KMS 58.4										DIRECTION N 17° 8 E									
		LINE ON		58.4								DIRECTION N 17° 8 E																			
*	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN					
1		0	-75	-37	0	-249	+156	+436	+159	+330	-212	-349	-374	-249	-343	-31	-69	-75	-131	+237	+56	-305	-69	+224	-143	-5					
2		+673	+181	-106	+50	-249	+193	+243	+318	+62	-62	-424	-505	-181	+156	+62	+368	-12	-50	-106	-125	0	-37	+56	+37	-23					
3	X	-262	+424	+125	-212	+131	+156	+255	+305	0	-181	-293	-305	-187	-44	+69	0	-112	-137	-56	+12	-112	-150	-12	0	-24					
4		-368	+156	+31	+75	+69	+125	+62	+436	-31	-156	+125	-131	-181	+62	+193	+262	+44	-87	+12	+12	+542	-162	-118	-137	+35					
5		-193	-249	-12	+430	-69	0	+62	+299	-262	-611	-197	-237	0	+243	+312	+262	+112	-19	+37	-19	-174	+69	-492	+498	-6					
6		-62	-997	+754	+62	-150	-62	+125	+187	+349	-125	-193	-262	-150	+885	+561	+109	-430	-187	-305	-174	+87	+112	-137	+181	+49					
7		-629	+187	+174	-106	+25	+112	+436	+312	+81	-305	-567	-374	-312	+174	+262	+374	-187	-50	-12	+168	+131	-137	-81	+249	-3					
8		-56	-62	-143	-374	+12	+181	+498	+187	-249	-361	-193	-143	-25	+249	+374	+262	+330	+125	-125	-81	+44	+62	-118	-374	+1					
9		+274	-62	+12	+69	-312	+280	+312	+262	+193	+1040	+498	-268	-249	-56	+131	+249	+199	0	-69	+243	+19	-287	-174	-62	+94					
10	X	+299	-162	+187	-137	-19	+44	+181	+280	+168	-37	-199	-748	-579	-293	+81	+131	+143	+125	-125	-44	-69	+62	-187	-106	-42					
11		-143	-62	0	-25	-106	+187	+162	+75	+125	+255	-56	-374	+118	+374	-150	-93	+673	+692	+62	-69	+277	-255	-106	+872	+143					
12		-810	+305	-386	-685	+318	+554	+293	+274	+193	+156	-847	-623	-55	+262	-156	-125	0	+587	+31	0	-137	-330	-125	-100	-72					
13		-199	-218	-386	0	+262	+231	+336	+368	+374	+125	-511	-193	-293	-386	-174	+249	+69	+249	..	..	..	..	..	..	..
14		..	..	..	..	..	..	..	..	..	0	-368	-536	+318	+31	-87	0	+349	+12	+168	-112	+498	+69	-168	-255	..
15		-162	-25	+44	-380	+56	+143	+424	+374	+262	+69	+187	-62	-579	-25	+62	0	0	+62	+293	+461	-330	+355	-498	+237	+40					
16		-249	-150	-305	-224	+274	+131	+542	+449	+187	+37	-330	-760	-523	-143	+118	-56	+680	-137	0	-50	+19	-93	-125	+368	-15					
17		+62	-262	-93	-685	+137	+411	+424	+355	-50	-455	+125	+280	-343	-31	+199	+785	-361	+206	-417	+355	-249	-573	-187	-343	-30					
18		+231	+69	-37	-280	+81	+143	+293	+224	+187	-374	-44	+31	-361	+224	-31	+399	-299	+19	-237	-112	-131	-62	-199	+50	-9					
19		-243	-212	-75	-199	+243	+87	+75	-156	+125	-343	-131	-343	-187	+93	+150	-125	-212	-100	-19	-168	0	+336	-293	0	-71					
20		-137	+125	-349	-156	-44	+56	+386	+536	+343	-37	-187	-168	+75	+87	+125	-62	+212	-181	+438	-417	-137	+100	+511	-729	+19					
21		-280	-193	-249	+748	-118	+81	+150	+218	+424	+75	-249	-131	-143	-193	+156	+187	-156	+405	+93	-6	+436	-978	+280	+81	+27					
22		+69	0	-69	-243	+187	+118	+436	+174	+249	+218	0	-249	-305	-137	-212	+305	+361	-100	+81	+31	-150	-100	-87	+31	+24					
23	X	-37	-280	+112	-62	-50	+112	+336	+131	-125	-349	-386	-386	-174	+125	+187	+62	+187	+112	-62	+137	-87	-69	-37	-69	-28					
24	X	-112	+87	-87	-56	0	+131	+374	+361	+131	-19	-280	-243	-131	-174	-50	+187	-131	-125	-37	+69	-137	-69	-100	-199	-25					
25	X	-131	-62	-75	0	0	-12	+324	+349	+125	-69	-299	-542	-486	-150	0	+193	+237	0	-93	-25	-69	0	-93	-106	-41					
26	X	-87	+12	-199	+62	+25	+75	+193	+436	+224	0	-573	-530	-392	-162	-81	+137	+69	-12	0	-62	+62	+187	+187	+112	-13					
27	X	-162	+62	-112	-12	-231	-193	+206	+237	+240	+299	0	-199	-498	-255	-374	+37	0	0	+69	0	+237	0	+25	0	-26					
28	X	+87	+81	0	-87	0	-131	+174	+374	+486	+349	-187	-374	-374	-330	-75	-125	+25	+75	+62	-62	0	-19	-62	-62	-7					
29	X	-37	-75	-125	-69	+37	+44	+100	+280	+735	+417	+249	-118	+100	+268	-143	-87	+218	+305	+31	+19	0	-12	0	0	+89					
30	X	-19	-12	-118	+93	+31	+44	+19	+187	+131	+62	0	-37	-112	-187	0	0	-62	-19	+69	+125	+69	+125	0	-19	+15					
MEANS ALL DAYS		-89	-45	-41	-86	+1	+113	+269	+308	+166	-26	-171	-292	-242	+34	+62	+163	+51	+48	-1	+10	+30	-71	-70	+7	+5					
MEANS 10 DAYS		-46	+8	-28	-48	-8	+27	+216	+294	+212	+47	-197	-348	-283	-120	-39	+54	+57	+32	-14	+17	-11	+6	-28	-45	-10					

10 LEAST DISTURBED DAYS

= 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

SEPTEMBER 1942
 EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
 (THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

SEPTEMBER 1942

COMPONENT EASTWARD LINE 0W LENGTH IN KMS 93.9 DIRECTION E 0° 5' N

DAY	#	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		0	-127	-95	-70	-343	-184	+216	+946	+495	+241	+70	+51	0	-159	-64	-190	-267	-318	+89	-64	-330	-64	+248	-572	-40
2		+762	+190	-64	-57	-267	-102	-57	+133	+57	-70	-267	-298	0	+159	+32	+260	-51	-203	-127	-133	0	-64	-64	-44	-12
3	X	-254	+279	+32	-127	-95	-13	+76	+229	+64	+32	-51	-57	-64	-64	-13	-133	-140	-152	-25	+51	-133	-114	-32	-25	-30
4		-254	+51	+152	-64	-51	+51	-190	+235	+121	+267	0	+13	-25	-57	0	+13	-127	0	+127	+114	+190	+114	-70	-197	+17
5		-254	-318	-108	+197	-114	-140	-38	+318	-64	-337	-159	-203	+241	+318	+184	+152	+127	+64	+267	+152	+64	+127	-413	+286	+15
6		+152	-724	+381	+102	-13	+89	+387	+114	+362	+127	+127	+203	-64	+190	+222	+181	-781	-197	-267	-190	+190	-57	-64	+127	+67
7		-400	+51	0	-44	-64	+57	+165	+190	+254	+140	-343	-222	-222	+114	+190	+232	-203	+19	-159	+184	+190	-159	+159	+127	+13
8		+127	-133	-210	-286	-114	0	+190	+248	-19	-95	-13	-298	-190	-25	+57	-51	-64	-70	-190	-76	+121	+95	-70	-419	-62
9		+127	-13	-89	+19	-267	-70	-38	+127	+254	+83	-76	-133	-254	-229	-64	0	+83	+64	+32	-64	+121	-197	-78	0	-28
10	X	+171	-64	-57	-108	-13	-32	-25	+222	+190	+184	-38	-381	-368	-235	0	0	+76	+248	+70	+64	0	-57	-260	+64	-15
11		-127	-64	-19	-51	-184	-95	-95	-254	+152	+686	+476	+25	+527	+832	-108	+349	+845	+787	-159	-470	+698	-222	+216	+356	+171
12		-572	+140	+203	+235	+241	+444	+222	+171	+286	+762	-584	-197	+114	+635	-70	+64	-140	+102	+241	+38	-38	-375	+13	-133	+75
13		-114	-165	-127	+146	+197	+190	+235	+349	+444	+514	-190	+470	+178	-222	-216	+413	-267	+419	..	..	..	..	..	..	..
14		..	..	..	..	..	..	..	..	..	+413	+190	-235	+635	+133	+165	-152	+64	+76	+387	-381	+286	-64	+260	-178	..
15		-64	0	0	-57	-51	-51	+279	+349	+381	+343	+413	-64	-464	-229	-254	-229	-140	-57	+127	+356	-190	+133	-146	+190	+24
16		-64	-121	-229	-76	+64	+89	+133	+127	+89	+127	-19	-464	-381	-13	+197	-13	+337	-44	-368	0	+70	-64	-222	+343	+21
17		+19	-70	-121	-127	-70	0	+273	+514	+178	-330	+444	+184	-184	0	+375	+368	-254	+70	-381	+305	-190	-311	-190	-222	+12
18		+190	0	0	-57	+13	+6	+114	+337	+324	-140	+286	+394	-229	+305	-159	+286	-114	-44	-254	+13	0	+413	0	+241	+80
19		+210	+178	+190	+457	+318	+349	+457	+229	+279	+140	+190	-64	+19	+267	+330	-190	+19	+114	-64	-127	+25	+76	-64	+13	+140
20		+127	+64	+178	-32	+64	+178	+216	+464	+305	+190	+76	0	+178	-64	+76	+216	+159	-64	+127	-356	-298	+127	+444	-343	+85
21		-178	-64	-318	+698	+127	+241	-13	+121	+305	+698	+32	-38	-318	-203	-32	-64	-133	-114	0	-25	+362	-826	+203	+305	+32
22		0	-51	-64	-298	+311	0	+241	+102	+203	+406	+337	-222	-248	-127	-114	+254	+89	-254	+70	-254	-114	-13	+13	-121	+6
23	X	-76	-159	+127	-13	-64	+64	+152	+190	-51	-190	-286	-311	+13	+146	+190	0	+292	+140	-127	-190	-57	-57	-51	-64	-18
24	X	-127	+26	-70	-70	-13	+6	+159	+343	+171	+127	-76	-178	0	-127	-127	+197	-76	-140	-51	-89	-64	0	-190	-121	-18
25	X	-127	-76	-89	0	-64	0	+127	+197	+114	+64	-19	-254	-260	-127	-95	+76	+102	-64	-89	-64	-51	0	-89	-38	-34
26	X	-76	-57	-254	+76	-64	0	-38	+318	+317	+203	-171	-267	-197	-64	+102	+76	-64	-114	-64	-133	+140	+190	+203	+127	0
27	X	-190	-13	-114	-57	-197	-235	+95	-64	+64	+178	+102	+76	-70	-95	-260	+19	-140	-95	+70	-44	+51	-13	-121	-44	-46
28	X	-76	-19	-121	-70	-76	-165	+51	+190	+311	+83	-25	-165	-83	-76	0	-184	-127	-51	-102	-83	-44	-76	-57	-114	-45
29	X	-51	-64	-114	-89	+121	+70	+44	+83	+89	+171	+83	-38	-51	-190	-133	-203	-190	-133	-127	-64	-44	-89	0	-38	-40
30	X	-165	-76	-203	+70	+64	-25	-89	0	+44	+64	+178	+210	0	-108	-70	-127	-152	-140	-64	0	-51	-89	-102	-121	-40
MEANS ALL DAYS		-42	-43	-38	+4	-29	+19	+108	+221	+189	+148	+25	-96	-92	+28	+7	+86	-37	-23	-50	-41	+22	-56	-28	-16	+11
MEANS 10 DAYS		-97	-17	-86	-39	-40	-33	+35	+171	+133	+2	-30	-136	-108	-94	-61	-28	-42	-50	-51	-55	-25	-30	-70	-37	-28

* = 10 LEAST DISTURBED DAYS

OCTOBER 1942

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT					LINE ON		LENGTH IN KMS					DIRECTION N 17° 8' E												
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	- 50	- 56	- 62	- 56	+ 68	+ 68	+ 223	+ 334	+ 124	- 62	- 248	- 427	- 446	- 316	- 173	- 43	+ 62	0	+ 111	+ 50	- 56	- 124	- 111	- 111	- 54
2		- 25	+ 198	+ 384	- 50	- 58	- 928	+ 433	+ 1300	+ 743	+ 353	- 310	- 297	+ 427	+ 329	- 136	- 12	+ 124	+ 755	+ 74	0	- 390	- 310	+ 155	- 90	+ 136
3		..	..	..	..	..	..	..	..	+ 223	- 204	- 310	0	- 19	- 74	+ 186	+ 310	+ 280	- 279	0	- 130	- 118	- 198	+ 310	- 235	..
4		- 124	+ 31	+ 204	- 322	- 297	- 155	- 25	+ 563	+ 111	- 68	- 260	- 68	+ 111	+ 155	+ 155	+ 681	+ 142	+ 149	- 186	+ 237	- 124	- 31	- 755	+ 62	+ 10
5		+ 87	- 737	- 139	- 173	- 328	+ 458	- 74	- 124	+ 74	+ 192	- 155	- 136	0	+ 186	0	- 93	+ 90	- 93	- 186	- 68	0	0	- 62	0	- 56
6		+ 19	- 235	+ 186	0	- 37	+ 56	+ 186	+ 237	+ 130	- 111	- 279	- 322	- 161	- 68	- 111	- 130	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	..	..	- 43	- 155	- 334	- 167	- 62	+ 93	+ 254	- 12	- 111	0	+ 266	- 111	- 167	- 62	- 118	..
8	X	- 87	- 124	+ 124	0	+ 62	- 93	+ 217	+ 241	+ 124	0	- 371	- 495	- 635	- 161	+ 62	+ 130	+ 173	+ 161	+ 99	+ 93	0	- 12	- 155	- 124	- 32
9	X	- 37	- 37	0	0	+ 25	- 74	+ 173	+ 359	+ 254	- 99	- 489	- 501	- 359	- 124	+ 50	+ 130	+ 62	0	0	- 12	- 37	- 80	0	- 136	- 39
10		- 142	- 31	- 12	+ 43	- 62	+ 130	+ 322	+ 495	+ 198	0	- 266	- 452	- 458	- 316	- 80	+ 248	+ 130	+ 56	+ 167	+ 130	+ 80	- 12	+ 50	- 68	+ 6
11		- 93	0	- 223	- 12	+ 186	+ 19	+ 235	+ 768	+ 248	- 223	- 730	- 742	- 619	+ 330	- 229	+ 687	+ 249	+ 62	+ 248	+ 176	- 180	- 62	- 248	- 334	+ 26
12		- 272	- 371	+ 446	- 1498	+ 514	+ 768	+ 316	+ 730	+ 651	+ 706	+ 124	- 415	- 551	- 235	- 186	+ 247	+ 254	- 31	+ 303	+ 359	- 310	+ 155	- 285	+ 19	+ 63
13		- 62	- 303	- 371	+ 50	+ 136	- 30	+ 248	+ 619	+ 223	+ 347	0	- 743	- 254	- 186	+ 452	+ 136	- 120	- 136	+ 316	- 43	+ 132	+ 186	+ 6	- 58	+ 23
14		- 180	- 192	0	- 248	- 33	0	+ 378	+ 724	+ 303	- 316	- 285	- 19	+ 243	+ 132	+ 118	- 464	+ 62	+ 186	+ 217	- 93	+ 173	0	+ 303	+ 310	+ 55
15		- 433	- 231	- 74	+ 87	+ 68	0	+ 217	+ 62	+ 155	- 167	+ 124	+ 149	- 501	0	- 93	+ 458	- 291	- 56	+ 582	- 241	- 74	- 62	0	- 111	- 20
16		- 99	- 248	- 80	- 155	+ 130	+ 25	- 12	+ 316	+ 334	+ 210	+ 62	- 93	- 124	- 149	- 285	- 248	- 111	- 31	+ 19	- 99	+ 62	+ 291	- 130	+ 62	- 15
17		+ 56	- 235	- 192	+ 99	0	- 50	+ 173	+ 193	+ 93	- 43	- 124	- 50	- 80	+ 186	0	0	- 111	- 111	+ 62	+ 217	+ 136	- 254	- 266	+ 31	- 11
18		- 291	+ 439	- 12	- 31	- 124	+ 57	0	+ 132	+ 149	+ 50	- 12	- 105	- 124	+ 68	+ 126	+ 161	+ 210	+ 724	+ 231	- 303	- 62	- 50	- 316	- 433	+ 27
19		+ 235	+ 310	- 297	- 192	+ 105	+ 186	+ 111	+ 692	+ 120	+ 241	+ 235	- 142	- 242	- 74	+ 68	+ 161	+ 19	+ 167	- 130	+ 74	+ 62	0	0	- 167	+ 67
20	X	0	0	- 68	+ 142	- 192	0	+ 19	+ 204	+ 31	+ 439	+ 248	+ 19	- 124	0	+ 62	+ 124	+ 12	0	- 12	0	0	0	+ 25	- 68	- 1
21	X	- 19	- 316	+ 62	+ 12	+ 50	+ 180	+ 136	+ 74	+ 124	- 271	- 452	- 272	- 149	+ 74	+ 310	+ 186	+ 62	+ 62	+ 19	+ 119	+ 80	- 12	- 87	- 90	- 9
22	X	- 43	- 87	0	+ 62	0	- 192	+ 223	+ 132	+ 136	- 149	- 322	- 291	- 322	- 124	+ 68	+ 93	+ 124	+ 62	+ 69	+ 118	0	- 50	+ 24	- 210	- 26
23	X	- 62	+ 56	+ 136	+ 118	- 62	+ 99	+ 167	+ 111	+ 136	- 124	- 254	- 464	- 310	- 74	+ 93	+ 130	+ 62	+ 31	+ 62	+ 87	+ 12	+ 50	0	0	+ 2
24	X	- 62	- 62	- 80	- 93	0	+ 62	+ 186	+ 247	+ 254	- 136	- 353	- 328	- 231	- 62	+ 62	- 12	- 68	0	+ 192	+ 446	+ 278	+ 210	+ 415	+ 217	+ 51
25		- 241	- 130	- 415	- 272	+ 25	+ 99	+ 37	+ 295	- 56	- 62	- 105	- 248	- 266	- 50	+ 74	+ 99	+ 62	+ 97	+ 130	+ 254	+ 62	+ 87	- 99	- 186	- 35
26	X	- 192	- 74	- 80	- 31	- 12	+ 25	+ 241	+ 279	+ 173	+ 19	- 243	- 359	- 365	- 50	- 118	- 149	+ 124	+ 241	+ 322	- 87	- 111	0	- 161	- 31	- 27
27	X	- 62	- 285	- 111	0	+ 62	+ 124	+ 254	+ 303	+ 173	- 130	- 359	- 477	- 446	- 137	0	+ 124	+ 37	+ 124	+ 90	+ 62	+ 56	0	0	- 56	- 27
28		- 63	- 87	- 161	+ 124	0	+ 353	+ 371	+ 173	+ 355	+ 1201	+ 712	- 334	- 285	+ 832	+ 353	+ 223	+ 687	- 316	0	+ 260	+ 217	+ 353	- 1232	- 910	+ 85
29		+ 1300	- 68	- 520	- 650	- 799	+ 489	+ 817	+ 625	+ 155	+ 600	- 217	- 241	+ 74	+ 57	+ 464	- 37	+ 180	+ 254	+ 74	+ 328	- 310	+ 192	- 755	- 68	+ 80
30		+ 99	- 978	- 303	+ 371	- 186	+ 186	- 316	+ 427	+ 353	+ 118	+ 87	- 93	- 94	- 62	+ 433	+ 74	- 124	- 74	+ 495	- 105	- 180	+ 111	+ 186	- 340	+ 3
31		- 260	- 12	- 142	- 310	- 712	+ 248	+ 297	+ 198	+ 124	- 43	+ 223	+ 279	- 241	- 235	+ 105	- 328	0	0	+ 142	+ 31	+ 43	- 68	+ 186	- 62	- 22
MEANS ALL DAYS		- 40	- 130	- 73	- 107	- 53	+ 71	+ 133	+ 332	+ 230	- 28	- 134	- 262	- 209	+ 19	+ 94	+ 100	+ 76	+ 81	+ 127	+ 109	- 10	+ 20	- 116	- 105	+ 9
MEANS 10 DAYS		- 64	- 98	- 8	+ 15	0	+ 20	+ 184	+ 244	+ 153	- 149	- 285	- 360	- 344	- 100	+ 42	+ 71	+ 70	+ 68	+ 94	+ 88	+ 32	- 11	0	- 60	- 16

* = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

OCTOBER 1942
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

OCTOBER 1942

COMPONENT EASTWARD

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1	X	-76	-69	-76	-101	-126	0	+126	+170	+158	-57	-19	-88	-202	-189	-114	-50	+50	+57	+63	-101	-69	-202	-126	-126	-53
2		+19	+13	+151	-69	-139	-164	+202	+921	+726	+429	+423	-69	+606	+700	-442	-76	+151	+726	+69	-164	-126	-196	+271	-316	+152
3		..	..	..	..	..	..	..	+587	-69	-391	+303	+120	+145	+63	+32	+221	+69	-246	-328	+32	-114	-25	+473	+133	..
4		-120	+32	+76	-126	-379	+290	-208	+467	+120	+189	-429	+63	+221	+69	+151	+216	-13	-158	-284	+189	-202	-95	-814	+69	-24
5		+63	-316	-372	-297	-252	+309	+316	-252	-69	+139	-151	-63	+82	+196	-57	-120	-44	-170	-151	-139	-126	-126	0	-32	-68
6		-76	-322	+88	-50	-69	0	+145	+189	+126	-76	-183	-183	-57	-107	-139	-158	..	..	..	..	..	..	..	..	..
7		..	..	..	..	..	..	..	..	..	-114	-38	-69	+50	+63	+126	+303	-76	-189	-69	+13	-69	-57	0	-63	..
8	X	-19	-133	-38	-63	0	0	+252	+126	+208	+170	-57	+107	-347	-233	-120	-19	+170	+82	-13	+158	-69	-76	-322	+63	-7
9	X	-25	0	-82	-101	-170	-139	-133	+189	+196	+50	-278	-158	-164	-139	-57	-25	-57	-101	-76	-32	-57	-25	+63	-177	-62
10		-183	+13	-76	+19	-202	+95	+189	+372	+177	+120	+114	-57	-170	-265	0	+189	-69	+151	+196	+145	+126	0	+114	-44	+40
11		-69	-57	-221	-63	+196	+139	+202	+700	+328	+69	-454	-429	-360	+448	-202	-158	+183	+259	+246	+801	-183	+183	-379	-252	+39
12		-246	-50	+334	-448	+189	+1054	+341	+517	+644	+700	+492	-215	-366	-69	-215	+467	+265	-114	0	+316	-278	+88	-189	+69	+137
13		+13	-170	-63	-25	+76	-101	+221	+511	+252	+593	+631	-694	-139	-63	+498	-38	-341	-126	+126	-126	+164	+114	-170	0	+48
14		-25	-126	+126	-170	-126	+328	+208	+599	+126	-530	-246	+252	+606	+435	+133	-732	-170	0	+69	-164	+133	-713	+631	+423	+44
15		-372	-82	-133	-38	-63	-32	+164	+32	-19	-202	+202	+675	-442	+126	+114	+196	-252	-69	0	-120	-183	-133	0	-76	-29
16		+57	-170	-139	-259	+126	+265	-196	+107	+252	+252	+69	+126	+240	0	-240	-44	-202	-259	-177	-133	+101	-196	+177	+57	-8
17		+133	-189	-69	+63	-50	-63	+82	+32	+25	-63	0	+126	+164	+316	-19	0	-183	-196	-57	+69	+170	-309	-379	-44	-18
18		-133	+252	0	0	+25	-13	+32	+170	-19	+316	+265	+82	-189	+63	+95	+101	+151	+353	-297	+133	-189	-139	-435	-240	+16
19		+196	+164	-196	-297	-177	+448	+133	+341	+221	+196	+227	-120	-252	-6	-57	-88	-44	+69	-303	-63	-139	+69	+69	-177	+9
20	X	-114	-50	-63	+126	-63	+57	-133	+442	+114	-341	0	-57	-183	-69	+57	+50	-63	-50	-63	-76	-13	0	0	-69	-23
21	X	-57	-309	-13	-57	-50	+101	+151	-69	+246	-126	-429	-196	-107	+126	+227	+63	-63	-32	-44	+50	+38	-57	-151	-126	-37
22	X	-95	-126	-114	-63	-44	-164	+13	+114	+44	-107	-126	-69	-183	-170	-19	-19	+44	-13	0	+32	0	-88	-32	-271	-61
23	X	-139	0	-25	-19	-177	-38	0	-13	+63	+50	0	-290	-285	-196	0	+63	+76	-38	-63	0	-50	0	0	-57	-47
24	X	-126	-76	-151	-227	-126	-63	+63	+133	+297	-25	-133	-95	-227	-88	-25	-126	-189	-76	+215	+347	+252	+252	+366	+252	+18
25		-265	-101	-404	-341	-57	-88	-196	+25	-101	0	+126	+57	-50	-25	0	0	-32	+63	+63	+126	+38	0	-158	-139	-61
26	X	-126	-107	-101	-82	-63	-50	+63	+126	+69	+57	-69	-202	-164	+95	-170	-196	+63	+76	+88	-69	-95	0	-189	-13	-44
27	X	-25	-189	-133	-76	-38	0	+76	+69	+202	-63	-202	-290	-303	-57	+25	-25	-76	-69	0	-13	-50	0	-25	-44	-54
28		-88	-38	-196	-25	-170	+309	+473	+252	+1010	-177	+915	-240	+303	+789	+309	-126	+549	-700	-366	+88	-164	+101	-820	-1041	+39
29		+877	+284	-353	-461	-928	+883	+473	+631	+221	+1224	-252	-208	+379	+139	+278	-227	+114	+120	+95	-183	-88	+82	-738	+215	+107
30		+133	-480	-126	+120	-63	+568	+114	+467	+555	+227	+189	-215	-67	+95	+297	0	-215	+189	+139	-13	+126	0	+126	-246	+72
31		-133	-88	-101	-170	-568	+88	+233	+69	+101	+221	+442	+404	-120	-50	-164	-442	-183	-221	+50	0	0	-221	+208	+25	-26
MEANS ALL DAYS		-34	-77	-91	-116	-122	+144	+116	+259	+220	+118	+45	-67	-61	+64	+10	-38	-14	-13	-17	+38	-33	-60	-104	-83	+3
MEANS 10 DAYS		-80	-106	-80	-66	-86	-30	+48	+129	+160	-39	-131	-134	-214	-92	-20	-28	-4	-28	+11	+30	-11	-20	-42	-57	-37

* = 10 LEAST DISTURBED DAYS

NOVEMBER 1942
(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)
EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	MEAN
1		-451	+182	+244	-282	-125	0	+219	+307	+244	+282	-269	-413	-426	-156	-25	-56	+63	+138	+194	+194	+125	0	-25	-69	-4
2		-38	-326	-413	-125	+275	+6	+38	+156	+595	-238	+175	-163	-125	-38	-81	-75	+81	+13	+113	-88	0	+63	+38	-200	-15
3	X	+31	+56	+63	-219	-184	-250	0	+106	+225	-56	-75	-225	-138	+75	+63	+69	0	+63	0	+63	+125	-113	-94	-108	-22
4		-250	+413	+150	0	-438	+257	+125	+238	+131	-69	-188	-307	-238	-131	+13	+175	+125	+138	+50	-119	-75	-50	-119	-75	-10
5		-50	0	0	0	-25	+19	+138	+313	+269	-69	-69	-445	-351	-376	+50	+188	+438	+50	+100	+532	-369	-175	-75	-56	+2
6	X	+13	+63	-182	-63	0	-13	+182	+432	+244	-194	-300	-326	-300	-169	+38	-13	-75	+63	+376	-125	-113	+56	+138	+225	-2
7		-238	0	0	-31	-63	+63	+113	+432	+19	-207	-178	-184	-303	-249	-267	-24	-59	+83	+238	+65	-59	+77	+166	-291	-37
8		+154	+89	-238	+238	+42	+119	+143	+188	+119	-83	-202	-368	-309	+178	+36	-65	+71	+202	+166	+59	-65	0	-101	-119	+10
9	X	-59	-48	-101	-65	-59	-113	+119	+220	+172	+48	-178	-356	-267	-321	-178	-131	+48	+125	+65	+125	+131	+59	0	-36	-33
10	X	-71	-148	-190	-125	-48	0	+303	-196	+279	+95	0	-184	-238	-65	+60	-113	+60	+203	+322	+269	-239	+107	-78	-131	-5
11		-161	-66	-24	0	0	-203	+96	+239	+304	0	-191	-185	-310	-185	+72	+54	+143	+119	+137	+269	-227	+107	-72	-233	-13
12	X	+167	-125	-131	-143	+60	0	+119	+334	+107	-72	-322	-191	-209	-84	+48	+119	+251	+119	-78	-24	-48	+72	0	+60	+1
13		-60	-179	+72	-179	-60	+107	+185	0	-352	+119	0	0	0	0	0	-167	+78	+131	+179	+36	+131	0	-90	-119	-7
14		+412	-664	+179	+173	+66	-60	+197	+203	+119	-167	-125	-239	-191	-239	+119	+107	0	+585	-191	+12	+48	-72	-60	-60	+6
15		-48	-66	-78	-12	+60	+60	+167	+72	+179	-227	-149	-125	0	-191	-179	+143	+334	+101	-233	-78	0	+48	0	-12	-10
16	X	-48	0	-30	0	-48	0	+119	+107	+48	-72	-119	-137	-72	0	-78	-54	-54	-72	+78	-18	+66	-113	+60	-113	-23
17	X	+113	+48	0	-54	-185	-251	+191	+48	-54	0	+60	-66	-66	-18	+72	+179	+358	+78	+298	-36	-173	-72	-18	-60	+16
18		-245	-96	+239	0	-119	0	-72	+30	+66	-60	-84	-155	+72	-60	0	-66	0	+113	+66	+107	+78	+60	+113	-179	-18
19	X	-131	-60	-107	-119	-179	+54	-36	+60	+72	+36	-143	-358	-179	-125	-66	0	+179	+227	+293	+185	+125	+173	-239	-173	-21
20		-209	+30	+30	+209	-173	+113	0	0	+66	+119	+107	+36	-322	-173	-66	+173	+173	+239	+107	+119	+119	+167	+322	-478	-30
21		-66	+96	-72	+18	-251	0	+107	+54	+143	+60	-60	-245	-173	-60	+96	+60	0	+72	+60	+60	-12	0	-60	-54	-9
22	X	-48	-131	0	0	+12	0	0	+125	+78	0	-185	-322	-269	-119	+60	0	-30	+42	+60	+60	0	+185	+60	-72	-21
23		0	-113	+48	0	+30	-418	-179	+275	+501	-585	+179	-239	-179	+334	+287	+1009	+454	-48	+1254	-304	+836	+364	-704	-173	+110
24		+221	-657	-442	+101	+48	-651	0	-54	+376	-60	-72	-125	0	-107	-173	+119	+281	+227	+418	+72	-137	+334	-101	-257	-27
25		-334	+54	-54	-310	-322	+287	-340	-179	+394	-54	+269	-78	-191	-66	+579	-287	-173	+60	+257	+860	+340	-173	-275	-412	-6
26		0	-12	-263	-316	+293	-18	-143	+472	+233	+388	-107	-191	+125	-197	-185	+221	-12	-72	+48	+161	+54	+78	+24	-185	+10
27		+179	-275	-687	+460	-185	+113	+60	+24	+227	+54	+18	-173	-173	-185	-18	-197	+54	+131	+66	+66	+60	+239	0	+131	-0
28		-239	-18	-263	-478	0	+30	-412	+710	-185	+716	+233	-227	-191	-227	-119	+531	+173	+275	+125	-125	+107	-113	-48	0	+11
29		0	0	-597	+66	+48	-304	+179	+227	+60	0	+48	-161	0	-42	0	+54	0	+54	+48	0	+90	+185	-12	-48	-4
30	X	-657	+233	+48	0	-107	-119	-334	-42	-125	+167	+119	+66	0	-101	-54	+12	+24	+30	0	+96	+24	+42	-12	0	-29
MEANS ALL DAYS		-70	-58	-93	-42	-55	-39	+43	+163	+152	-4	-60	-203	-167	-103	+3	+66	+100	+116	+154	+83	+31	+46	-42	-110	-4
MEANS 0 DAYS		-69	-11	-63	-79	-75	-69	+66	+119	+105	-5	-114	-210	-174	-93	-4	+7	+76	+88	+141	+60	-10	+40	-18	-41	-14

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EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

NOVEMBER 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

NOVEMBER 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT										LENGTH IN KMS										DIRECTION										E 0.5 N	MEAN
		EASTWARD					LINE ON					93.9					0.5 N																
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24								
1		-438	-64	+184	-102	-222	-152	+127	+127	+248	+330	0	-190	-254	-108	-64	-121	-95	+64	+171	+32	-267	+127	+70	-146	-31							
2		-44	-254	-362	-203	-83	+13	0	-13	+578	-64	+413	+152	-95	-19	-70	-83	-38	-133	+32	-197	+13	+64	-95	-229	-30							
3	X	-64	-19	+51	-127	-76	-184	+64	-108	+108	+64	+133	-83	-64	+83	0	0	-171	-114	-114	-13	+76	-190	-95	-83	-39							
4		-375	+343	+127	-57	-648	+114	+70	+121	+64	+70	+13	-51	-171	-114	-89	+95	+121	+64	0	-152	-121	-64	-178	-121	-39							
5		-76	-57	-114	-70	-64	-13	+190	+305	+197	+51	+70	-349	-273	-337	-70	+197	+502	-76	+165	+260	-248	-190	-76	-102	-7							
6	X	-57	0	-197	-70	-64	-114	+64	+311	+254	-171	-127	-197	-184	-76	+57	-190	-254	-64	+178	-121	-19	+114	-178	+286	-34							
7		-203	-70	-13	-140	-159	0	+19	+318	+184	-70	-64	-38	-140	-298	-324	-203	-178	0	0	-51	-159	+51	+171	-241	-67							
8		+133	+127	-260	+64	0	0	+127	-70	+140	+89	-64	-184	-76	+171	-146	-235	+57	+133	+114	-108	-114	0	-133	-83	-13							
9	X	-64	-83	-95	-133	-114	-70	-25	+108	+114	+190	0	-178	-57	-305	-286	-311	-197	-51	-108	+70	+51	+70	-64	-70	-67							
10	X	-121	-190	-311	-260	-127	-140	+438	-241	+44	+70	+203	+121	-51	+76	+127	-260	-25	+184	+127	0	-266	+57	-82	-133	-32							
11		-158	-57	0	-114	-152	0	-171	+63	+133	+76	+19	+260	-184	-190	-32	-51	-44	-120	+63	+38	-323	+152	-114	+63	-35							
12	X	+89	-114	-146	-133	-70	-63	-57	+222	+19	0	-133	+13	-51	-57	-76	0	+171	-133	-127	-203	-133	-13	-57	+63	-41							
13		0	-190	-19	-222	-158	-146	+63	+158	-311	+76	+127	+209	+228	+133	0	-317	-184	0	+51	+13	+63	-133	-152	+184	-22							
14		+247	-279	-120	0	-127	-127	+25	+114	+57	0	+133	-38	-44	0	0	-101	-184	+133	0	-247	+95	-63	-82	-120	-30							
15		-95	-120	-171	-76	0	0	-13	0	+197	-114	-184	0	+266	-63	-32	+108	+311	-127	-342	-120	-19	+38	+51	0	-21							
16	X	-95	-70	-63	-82	-70	-63	0	-51	-51	-70	0	+82	+127	+19	-152	-178	-108	-203	-70	-108	0	-120	+76	-171	-59							
17	X	+63	0	-13	-114	-57	-323	-13	-38	-190	-57	+120	+114	+13	-19	-38	+133	+254	+127	+184	-178	-266	-127	-76	-139	-27							
18		-311	-114	+146	-76	-133	-76	-184	-25	-76	-139	-51	0	+304	0	-89	-241	-146	0	-70	+57	+13	0	+51	-247	-59							
19	X	-70	-108	-190	-133	-266	-82	-133	-120	-19	+70	+114	-190	-38	-152	-203	-190	+63	+127	+292	+146	+65	-114	-57	-133	-55							
20		-209	-114	-120	+13	-171	-63	+19	-184	-51	+101	+387	+539	-380	-120	-114	+184	+76	-13	-70	-44	+51	+89	+51	-653	-33							
21		+13	+19	-82	-51	-178	-57	+13	-51	+32	0	+114	-44	0	+25	+82	-51	-178	-127	-51	0	-13	0	-51	-51	-29							
22	X	-63	-190	-63	-70	-13	-82	-76	-63	-70	-51	-76	-133	-197	-108	-114	-190	-184	-197	0	0	-76	+247	+76	-133	-76							
23		-114	-57	0	-114	+57	-323	-197	+184	+621	-418	+184	-69	+120	+342	+463	+179	+552	+127	+881	-571	+311	+114	-659	-539	+86							
24		+127	-158	+63	+355	-197	-266	-127	-374	+76	-133	+133	+203	+120	-342	-380	-114	+139	+57	+355	-57	-266	+190	+57	-298	-35							
25		-266	-51	-120	-190	-495	+70	-120	-260	+418	-133	+216	-127	-197	+95	+697	-444	-456	+57	+139	+767	-368	+279	-266	-437	-50							
26		-25	-203	-228	-260	+63	-70	-146	+279	-133	+507	+197	-311	+412	-184	-380	+120	-304	-317	-76	+76	-120	-260	0	-241	-67							
27		-13	-190	-526	+197	-70	+89	-63	-120	+13	0	+70	-13	+127	+57	-89	-380	-127	-133	-51	-19	-101	+247	+76	-13	-43							
28		-266	-190	-133	-260	-178	+63	-298	+323	-266	+818	+412	-51	-298	-418	-178	+571	-254	+133	-108	-393	-19	-70	-184	-76	-55							
29		-57	-76	-298	-133	-203	-203	-127	+57	+171	-89	+203	0	-13	0	-25	-63	-127	-114	-127	-114	-13	+70	+19	-32	-54							
30	X	-412	+70	-101	-63	-139	-184	-197	-216	-203	+190	+127	+190	+178	-63	-114	-120	-127	-133	-127	0	-57	-38	-63	-51	-69							
MEANS ALL DAYS		-97	-82	-106	-87	-137	-82	-24	+25	+77	+40	+90	-12	-29	-66	-55	-42	-38	-28	+44	-41	-74	+18	-65	-132	-38							
MEANS 10 DAYS		-79	-70	-113	-119	-100	-130	+7	-120	+1	+24	+36	-26	-32	-60	-80	-131	-58	-46	+24	-41	-63	-11	-52	-56	-50							

* = 10 LEAST DISTURBED DAYS

TABLE 317

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1942

EXPRESSED IN HUNDRED-THOUSANDS OF A VOLT PER KILOMETER

DECEMBER 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

		COMPONENT										DIRECTION										MEAN				
		NORTHERLY					E					S					W									
DAY	*	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	
1		-113	-119	0	-54	-72	-131	-167	-185	-36	+131	+185	+233	-125	-149	-66	-48	+119	+119	-131	0	+12	+72	+12	+12	-21
2	X	-48	-48	0	-18	0	-30	-60	-119	+18	+12	-48	-66	-66	-72	-24	-42	+54	+60	+18	+60	+24	+12	+12	0	-15
3		+48	-58	-66	-48	-72	-60	-48	0	0	+173	-48	-179	-203	-101	-107	+66	+298	-113	0	-78	+113	+12	+119	+24	-13
4		+18	-94	0	-78	-54	-84	-125	-406	0	+173	+119	-48	+72	+119	0	+12	-12	+66	+275	+251	+42	-101	-113	-125	-3
5	X	-125	-84	-125	+18	-48	-66	+12	+66	+72	-60	-72	-161	-131	+12	+48	-48	-60	+107	+72	+66	-12	-48	-66	-107	-31
6	X	-90	-96	-66	-66	0	+12	+12	-173	+72	+18	0	-12	-131	-113	-72	+72	+125	+72	+167	+125	+78	+60	-125	-107	-10
7		-72	-119	-406	+245	+107	-239	+245	-107	-221	-287	+167	+119	-239	+36	+96	+179	+281	+143	+96	+60	+12	+96	-84	-107	-2
8		-84	-501	+119	+107	+36	+60	-78	-125	-60	-131	-84	+12	+48	+54	-179	-60	+179	+233	+167	+358	+48	0	-96	-203	-8
9		-185	+12	-245	-161	-203	+107	+137	-101	-191	+185	+537	+239	-185	-48	+48	+101	+543	+167	+418	+418	+412	-896	-119	-24	+40
10		-358	-251	0	0	-143	-48	0	-48	-107	-149	-60	-119	-119	0	0	-125	-18	+119	+107	+161	+478	-48	-119	-167	-42
11		-107	-119	-418	+107	+66	-167	-179	+245	+251	+66	-101	-251	-298	-298	-119	-48	+352	+66	0	+125	+60	+48	+60	-66	-30
12		+66	-72	-334	+131	-304	-119	+245	+245	+322	+78	-72	-287	-191	-227	-72	-24	0	+107	+12	+60	+96	0	+60	-60	-14
13	X	-125	-66	-78	-60	-113	-12	-48	-60	+143	+113	+119	-42	-125	-119	-167	-125	+30	+36	+173	+167	+96	+78	0	-96	-12
14		-119	+60	-179	-167	+54	-72	-24	-60	+66	+72	+167	-179	-84	-125	-173	-24	-66	+78	+48	+119	+24	0	0	+12	-24
15		-66	0	0	-60	-113	-179	-60	-179	-54	+72	-72	+60	-30	-239	-66	-60	+119	+298	+42	+119	+113	+179	0	+12	-7
16	X	+12	0	-173	-66	-239	-179	-36	+60	+131	+304	+60	-60	-251	-161	-12	-42	-66	+18	+84	+60	0	+48	-36	0	-23
17	X	-66	-12	-54	-96	-107	-119	-84	-107	0	+161	+185	+107	+60	-72	-84	-119	+36	+137	+119	+143	-125	-36	-48	-84	-11
18	X	-113	-72	-48	-60	-78	-42	-18	-161	+66	+179	+185	0	-137	-72	-84	-84	+60	+90	+66	+90	+48	+66	-66	-113	-12
19		-119	-60	-72	-48	-84	-72	-119	-221	-113	+69	+166	+46	-63	-57	+11	-63	+166	+269	+252	+281	-34	+92	+46	-69	+9
20		-109	-74	+46	-57	+46	+57	+69	-52	-23	+115	+321	-229	-183	-235	-338	-46	+172	0	+332	+670	+338	+401	+556	-584	+50
21		-327	-344	-682	-109	+252	-968	0	+745	+115	+166	+281	+229	+86	-69	+74	+132	0	+212	+378	+223	+286	+52	-178	-132	+18
22		+115	-178	-264	-86	-269	+86	-92	+17	+109	+183	+178	+126	-52	-309	-183	-17	+109	+97	+17	+115	+166	+160	-63	-120	-6
23		-298	+330	-63	-229	+92	-986	-607	+693	+619	+286	+332	-160	+229	+23	+115	-69	0	+206	+57	0	+109	-218	+143	+29	+39
24		-11	-355	-74	+178	-109	-132	-241	-344	-126	+235	+206	+115	-11	0	0	+223	-178	+57	+275	+619	-229	-80	-120	-69	-7
25		-52	-132	-350	+63	+57	0	0	-143	+195	+126	0	0	-183	-29	+80	+40	+96	+160	+401	-103	+613	-74	-229	-17	+20
26		-711	-241	+86	+178	-447	-286	-103	-327	+355	+166	+573	+178	-57	+57	+57	-17	+115	-166	-52	+115	+223	+218	+34	-138	-8
27		-103	-126	-138	-126	-115	-57	-103	-69	+120	+115	+218	+166	0	-218	-109	-172	+23	+115	+109	+115	0	-12	-155	-17	-10
28		-109	-40	-109	-69	-120	-321	+109	0	+178	+229	+292	+178	0	-172	-269	-183	-74	+57	+63	+120	+52	+34	-40	-52	-10
29	X	-69	-120	-57	+17	-120	+17	+46	+69	+166	+229	+223	+138	-57	-155	-223	-229	-57	+103	+120	+115	+11	+11	-11	-63	+0
30	X	-69	-57	-69	-69	-57	-92	-80	+46	+120	+172	+120	+103	-52	-115	-178	-166	-46	+120	+126	+57	+46	0	-11	-63	-9
31	X	-69	-63	-109	-69	-63	-17	-34	+46	+183	+235	+178	-63	-223	-269	-132	-46	+34	0	0	0	+6	-11	-34	-52	-24
MEANS		-112	-90	-127	-24	-72	-134	-49	-24	+76	+111	+137	+6	-87	-101	-69	-33	+75	+97	+123	+149	+104	+4	-17	-89	-6
MEANS O DAYS		-76	-62	-78	-47	-82	-53	-38	-33	+97	+136	+95	-6	-111	-114	-93	-83	+11	+74	+94	+88	+17	+18	-38	-68	-15

★ = 10 LEAST DISTURBED DAYS

EARTH-CURRENT POTENTIAL-GRADIENT AT TUCSON MAGNETIC OBSERVATORY

DECEMBER 1942

EXPRESSED IN HUNDRED-THOUSANDTHS OF A VOLT PER KILOMETER

DECEMBER 1942

(THE TABULAR VALUES ARE AVERAGES FOR SUCCESSIVE PERIODS OF ONE HOUR AS INDICATED 105° WEST MERIDIAN MEAN TIME)

DAY	*	COMPONENT EASTWARD										LINE ON										LENGTH IN KMS										DIRECTION E 0.5 N										MEAN
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24																	
1		-114	-197	-51	-127	-133	-127	-197	-273	-197	+38	+171	+356	+108	-64	-13	-83	-127	-76	-298	-133	-51	-64	-121	-70	-77																
2	X	-133	-76	-70	-127	-64	-114	-127	-190	-133	-140	-19	+13	+57	+25	-13	-64	-108	-108	-140	-57	-64	-51	-64	-76	-77																
3		-13	-20	-108	-121	-114	-20	-121	-95	-70	+114	+64	-64	-76	-95	-190	+140	+248	-298	-70	-178	+127	+19	+318	-171	-37																
4		+311	0	+178	+64	0	-70	+19	+89	-222	+89	+102	+83	+127	+178	+76	+13	-51	+57	+381	+254	+70	+64	+216	+140	+90																
5		+171	+190	+127	+222	+203	+127	+197	+248	+248	+13	+51	+102	+70	+178	+108	-13	-57	+51	+70	+76	+64	+25	0	-64	+100																
6	X	-32	-64	-38	+13	0	+13	+38	-171	-64	-89	+19	+108	+121	+57	-51	+57	+51	-25	+76	+178	+127	+64	-64	-64	+11																
7	X	-57	-70	-241	+64	+13	-178	+318	-133	-127	-64	+203	+305	+19	+292	+197	+127	+178	+19	-70	-44	-13	+114	0	-32	+24																
8		+64	-508	+127	+64	+70	-76	-51	-102	+57	-76	0	+184	+248	+495	-184	-178	-133	+127	+114	+273	0	+127	-70	-165	+17																
9		-190	-38	-286	-318	-190	0	+127	+178	-318	-121	+800	+603	+254	+140	0	+260	+368	0	+254	+305	+171	-819	0	-13	+49																
10		-375	-241	0	-140	-121	-44	0	-190	-222	-70	+51	+51	0	+190	0	-324	-254	-32	0	+140	+457	+222	+127	-57	-35																
11		-76	-64	-140	-121	+127	-121	-13	-89	+64	+64	-19	-121	-114	-248	-70	-57	+343	-121	-254	-57	-95	-51	+57	+19	-48																
12		-25	+127	-171	+13	-254	-121	+127	+184	+70	-19	+64	-51	0	0	-38	-70	-51	-57	0	+19	+127	+121	+140	+64	+8																
13	X	-76	-51	-57	-70	-178	-51	-70	-121	-133	+76	+241	+190	+108	+64	-64	-241	-133	+64	+254	+267	+210	+178	+76	0	+20																
14		-51	+178	-70	-83	+95	+64	-25	-121	0	+76	+254	+13	+121	+51	0	-70	-190	-44	-13	+38	-13	0	0	+76	+12																
15		-13	-25	-57	-83	-184	-190	-171	-311	-210	-89	-57	+197	+197	-152	+51	-70	+102	+190	-32	+70	+89	+121	+57	+19	-23																
16	X	+64	0	-133	-70	-190	-279	-51	-76	+57	+318	+76	+216	-25	-127	0	-178	-190	-95	-13	0	0	+13	-70	-13	-32																
17	X	-95	-76	-70	-133	-127	-133	-127	-165	-171	+89	+127	+197	+178	+51	-70	-140	-127	+44	+64	+83	-140	-57	-102	-133	-43																
18	X	-140	-133	-83	-70	-178	-114	-64	-147	-57	+64	+140	+114	+64	0	-70	-114	-70	-64	+32	+114	+121	+70	-13	-203	-35																
19		-19	0	0	-25	0	-13	-57	-102	-64	+57	+114	+133	+114	0	+19	-101	+44	+152	+178	+197	+57	+120	+51	-63	+33																
20		-82	-63	-25	-108	+63	+25	+70	-13	-63	+114	+545	+260	+76	-127	-254	-32	+304	-222	+254	+919	+254	+596	+317	-266	+106																
21		-133	-171	-437	+25	+590	-228	+63	+894	+355	+818	+228	+399	+130	+57	+254	+184	0	+254	+247	+361	+330	-82	-76	-171	+165																
22		+235	-101	-32	-13	+51	+70	-38	-51	+44	+152	+317	+368	+184	-139	-190	-127	-57	+70	0	+178	+203	+292	-13	+44	+60																
23		-406	+748	-127	-355	-114	-406	-70	+583	+336	+254	+818	-76	+304	+127	0	-120	-127	+127	-44	-13	+57	-190	+89	+70	+61																
24		-57	-311	-146	+190	-292	0	-190	-139	-139	+114	+241	+133	+190	+101	+178	+184	-368	-63	+266	+361	-203	-152	-13	-63	-7																
25		-19	-178	-190	-38	-63	0	+32	-292	+63	+184	+89	+139	+114	+203	+279	+127	+114	+203	+406	-209	+577	+57	-190	+241	+69																
26		-552	-152	+235	+171	-158	-190	+13	-178	+57	+76	+634	+437	+197	+171	+184	-82	-44	-317	-158	+51	+254	+127	+51	0	+34																
27		+25	0	+19	+19	-13	+120	+51	-76	+63	+63	+241	+323	+266	-57	-51	-184	-76	+82	+63	+63	+101	0	+13	-178	+37																
28		-44	+51	-63	-13	-63	-133	+120	-63	+178	+260	+355	+254	+197	+25	-152	-184	-190	-38	+13	+95	+57	+63	0	0	+30																
29	X	-63	-76	-13	+51	+13	+76	+63	+13	+57	+197	+197	+254	+127	+101	-89	-178	-165	0	+70	+63	+51	+25	-13	-38	+30																
30	X	0	0	-13	-51	-13	-13	-63	-13	+57	+63	+108	+203	+178	+57	-70	-178	-108	0	+108	0	+13	0	-51	-70	+5																
31	X	-63	-63	-70	-57	-152	-13	0	+38	+127	+139	+190	+120	-51	-127	-146	-108	-108	-127	-70	-57	-51	-51	-51	-57	-34																
MEANS ALL DAYS		-63	-46	-65	-40	-44	-70	-6	-30	-12	+89	+205	+176	+114	+46	-12	-58	-32	-8	+54	+108	+92	+29	+19	-42	+11																
MEANS 10 DAYS		-37	-35	-42	-29	-69	-50	-20	-63	-1	+73	+113	+152	+83	+28	-46	-116	-102	-26	+45	+67	+30	+22	-35	-72	-5																

* = 10 LEAST DISTURBED DAYS

Department of Terrestrial Magnetism
5241 Broad Branch Road, N. W.
Washington 15, D. C.

